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In the Spotlight:
Dealing with the Russians
by Andrew Monaghan
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Welcome to the Spring 2022 issue of Parameters. This issue consists of an In Focus commentary, four article forums, and our inaugural SRAD Director’s Corner. In our In Focus essay, “Civil-Military Relations: Guidelines in Politically Charged Societies,” Patrick Paterson examines eight essential principles of military subordination to elected civilian officials, each of which purports to preserve a healthy balance in Western civil–military relations.

In honor of Women’s History Month, this issue’s first forum, Highlighting Diversity, Equity, and Inclusion, provides two contributions by women authors addressing issues of concern to women in the US military. The first contribution, “Interrupting Bias in Army Talent Management,” by Danielle Holt and Susan Davis, explains how systemic bias impacts the Army’s ability to assess talent; it concludes with recommendations for reducing bias in the Army’s assignment, promotion, and selection processes. The second contribution, “Rethinking Female Urinary Devices for the US Army,” by Andrea Peters, et al., examines a study conducted of female urinary devices employed during the annual Sandhurst Military Skills Competition at the United States Military Academy to redress the lack of education on, and use of, such devices; it then offers ways to improve women’s urogynecological health and well-being during military deployments.

This issue’s second forum, Understanding a Changing China, features two articles. The first article, “China’s Global Monopoly on Rare-Earth Elements,” by Gustavo Ferreira and Jamie Critelli, offers a novel economic analysis of American dependence on China for rare earth elements; it also discusses how Western nations might exploit this dependence to break China’s global monopoly. The second article, “Chinese and Western Ways of War and Their Ethics,” by C. Anthony Pfaff, argues China’s rich tradition of wartime ethics allows Western military leaders to understand Chinese strategic behavior better and thereby to avoid misunderstandings.


As mentioned above, this issue also features our inaugural “SRAD Corner” in which the director of the Strategic Research and Analysis Division of the US Army War College’s Strategic Studies Institute, Colonel George Shatzer, reviews books of possible interest to contemporary military strategists, especially those serving in US Army and Joint positions. In this issue, he analyzes two books concerning China’s challenge to American security: Rush Doshi’s *The Long Game: China’s Grand Strategy to Displace American Order* and Elbridge A. Colby’s, *The Strategy of Denial: American Defense in an Age of Great Power Conflict*. ~AJE
Civil-Military Relations: Guidelines in Politically Charged Societies
Patrick Paterson

ABSTRACT: Current events warrant a review of US civil-military relations doctrine. This special commentary examines eight principles of military subordination to elected civilian officials and addresses the fundamental question at the heart of civil-military relations theory and practice, namely, what options, if any, does the military professional have when civilian leadership disregards military advice? Examples drawn from US history can provide an important framework for understanding the complex interrelational dynamics at play.

Keywords: civil-military, apolitical, civilian, defense policy, US Constitution, professionalism

Civil-military relations theories are well developed and readers can examine the works of leading scholars to understand the origins and importance of the interdependence of the armed forces and elected officials. Space limitations prevent a lengthy literature review, but readers interested in the theoretical issues behind the topic should consult the works of US scholars such as Samuel Huntington, Morris Janowitz, Richard Kohn, Eliot Cohen, Peter Feaver, and Marybeth Ulrich. Of note, the 2009 edited collection of essays published by Suzanne C. Nielsen and Don M. Snider, American Civil-Military Relations: The Soldier and State in a New Era, is a particularly valuable examination of US military and civilian practices.1 The field lacks clear, practical rules military officers—particularly senior military officers who work closely with civilian counterparts—can use to guide their interactions with civilian leaders. This special commentary addresses that need.

The military’s responsibility is centered on the technical expertise and operational requirements related to the application of military force. While the military serves as a government organization that designs and executes military operations, it does not determine their necessity.2 In other words, the role of the military is to advise civilian authorities on how to employ the armed forces to achieve the policymakers’ goals, not to make political decisions or to determine

when the military should be used. As other scholars have written, a military that can choose its missions is not compatible with the principles of a democratic state.3

The working relationships between senior military leaders and civilian officials are complex. Civilians often make the final decision on whether to employ the armed forces, but they need input from experienced military officers to ensure the force is applied in an effective manner. Since most US military operations are foreign—domestic military operations are permitted only in exceptional cases—the military must ensure it does not get ahead of its State Department counterparts who are responsible for foreign policy.

Fundamental Rules of US Civil-Military Relations

There are eight generally accepted practices military officers should follow when adhering to the expectations of US civil-military relations. Surprisingly, these practices are not written succinctly in a military manual. Instead, they can be extracted from top scholars on the subject, from biographies of senior military officials, and from the advice senior military leaders provide in interviews, essays, and speeches. This analysis of the basic concepts associated with subordination to civilian-elected officials derives the fundamental behavior expected of military officers, explains the rules, and provides examples from US history.

While the eight practices sound simple, even unremarkable, they are difficult to apply. Most security problems are multifaceted due to competing interests, and they offer no clear or calculable costs-benefits analysis on how to proceed. There are diplomatic, economic, and political consequences to each course of action and assessing which one is most beneficial is a difficult task.

Remain Apolitical

The first key principle of the US military, and perhaps the most important characteristic of professional armed forces, is to remain apolitical. The military prides itself on being a disciplined, all-volunteer, professional force that is subordinate to and respectful of civilian leadership. Due deference to the president, the secretary of defense, and other elected civilian officials is part of the military culture. Taking sides in Washington politics, which can be hyper-polarized, could damage the institutional reputation of the armed forces by

associating it with the dishonest and corrupt practices many Americans connect with Washington policymakers. The political gridlock, disorder, and inefficiency are anathema to military officers who value honor, order, sacrifice, and patriotism over politics. According to public opinion polls, US constituents hold the military in high esteem while regarding political parties and Congress with contempt. The politicization of the armed forces could also taint the advice senior officers provide to civilian members of the defense community because the military might be seen as having a political agenda. Department of Defense regulation and the Hatch Act forbid active-duty military members from political participation and campaigning for candidates during election campaigns.4

Consider, the posture of the Joint Chiefs of Staff during the president’s annual State of the Union address. The chairman, vice chairman, and chiefs of staff of the branches of the armed forces sit in a place of honor in Congress near the front row. Rather than applaud when the president makes points, they do not react and sit attentively but unemotionally in their chairs. Any reaction, if made, could be construed as political advocacy.

Most senior military officers maintain this apolitical practice throughout their active-duty service. General Joseph Dunford, the first chairman of the joint chiefs of staff under President Donald J. Trump stayed out of the political infighting in the nation’s capital. “I’ve worked very hard to remain apolitical and not make political judgments,” he said. Taking a political position is just “not in my lane,” he added.5 Dunford served as chairman from May 2015 to September 2019 when he turned the position over to General Mark Milley. When asked if he would remain silent on the political turmoil once he retired, Dunford emphatically said, “I will not now nor will I, when I take off the uniform, make judgments about the President of the United States or the Commander in Chief. I just won’t do it.”6

Provide Candid Military Advice

The second fundamental practice is that senior military officers are required to provide objective advice about military policy. The counsel should be nonpartisan, nondeliberative, and, if required, include advice contrary to what politicians want to hear or that goes against current policy. The information

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should include an explanation of what the military operations will entail, the military objectives, the number of personnel and equipment required for mission success, and the limitations of such actions. The rule is to advise on how to use the armed forces, not to advocate for a specific course of action. Civilian decisionmakers should not feel the military is exerting undue influence on one course of action over another.

Candidness is the key requirement. Former Defense Secretary Robert Gates advised cadets at the US Military Academy at West Point, New York, “If as an officer you don’t tell blunt truths—or create an environment where candor is encouraged—then you’ve done yourself and the institution a disservice.” Former Marine General Anthony Zinni says such counsel is a military obligation regardless of the politics of the moment. “It is the obligation to give unvarnished professional military advice, despite administrative preferences . . . it is an obligation that comes with the uniform.” Retired Admiral James Stavridis, the most prolific military author of recent history, advised officers to express their opinions in military journals: “Don’t be afraid—have the moral courage to vet your ideas responsibly and sensibly. In virtually every case of which I am aware, even the most controversial articles are respected as attempts to contribute.”

_Civilian Authorities Retain Control over All Aspects of Defense Policy_

The third practice has to do with authorities. Many students of US national security believe there are two distinct spheres of authority between civilian and military officials. Civilian-elected officials oversee the larger strategic interests of the country, including the decision of when to deploy the military, while the armed forces make operational and tactical decisions if the military is called to action.10

Theory is one thing while the practice can be entirely different. Today, most scholars agree civilians have extensive control over nearly all aspects of military policy. In other words, the relationship between civilian leaders and military officers is not equal. Civilians have most of the authority and can make decisions, even ones affecting the traditional authorities of the armed forces: promotions, personnel assignments, and operational and tactical issues, for example. Some authorities may be delegated

to military officials, but civilians retain a veto power over military decisions. Richard Kohn stated the issue succinctly when he wrote, “the military possesses no autonomy of any kind not derived from civilian political institutions.”

Strategic planning is based on assumptions and when those assumptions are incorrect, military operations can go awry very quickly. As Peter Feaver says, “the civilians have the right to be wrong.” When civilians make these strategic errors, military servicemembers must accept the mistakes as part of the difficulty of managing complex military operations in a democracy. An example of this type of error is the 2004 US Marine Corps assault on Fallujah, Iraq. Three days into the battle, civilian leaders in Iraq ordered the marines to cease operations in order to seek a peaceful solution and to prevent unnecessary bloodshed. The decision was unpopular with the marines who realized it arrested their operational momentum and permitted the enemy to rearm and refortify their positions. Marine Corps leaders dutifully complied but chided civilians about operational interference. “I would simply say that when you order elements of a Marine division to attack a city, you really need to understand the consequences of that, and not, perhaps, vacillate in the middle of that. Once you commit to do that, you have to stay committed,” said Lieutenant General James Conway, the commander of US Marine forces during the operation.

Provide Congressional Testimony Prudently

The fourth rule concerns the dual responsibility the military has to the executive and legislative branches. According to the US Constitution, the US military serves at the direction of the president (in his role as commander in chief) and certain designated officials in the executive branch. To maintain the checks and balances so critical to the US system, Congress approves the military budget, determines the size of the armed forces, provides valuable oversight, and has the authority to declare war.

For these reasons, senior military officers can be called before the elected leaders of Congress to testify on military strategy and operations. For instance, the commanders of the regional and functional combatant commands, such as US Central Command or US Cyber Command, provide testimony on an annual basis to the Senate Armed Services Committee and House

12. Peter Feaver, Armed Servants, 5.
Armed Services Committee as part of the dual accountability of the armed forces according to the US Constitution.

The requirement to serve two co-equal branches of government—the executive branch represented by the president and secretary of defense on one side and the legislative branch represented by the armed services committees on the other—can present serious civil-military relations problems. Since disputes between the president, the secretary of defense, and senior military officers about military strategy and operational decisions frequently occur, these differences can often surface during testimony to Congress. Congressional opponents of the president can exploit disagreements between the president and his military advisers to their political advantage, portraying the president as being at odds with his generals and admirals. President Eisenhower referred to the requirement for congressional testimony as “legalized insubordination.”

What should senior officers do when they are required to testify before Congress on a policy the secretary of defense or the commander in chief disputed? Their principal responsibility is to follow the institutional requirement to provide candid advice and options to civilian leaders of the defense community and National Command Authority.

Second, officers should avoid being led into politically explosive dialogue. Congressional committees—particularly publicly broadcast ones watched by voters—are public forums where political grandstanding often occurs. Few actions are more impactful than for the public to hear generals and admirals admit they do not agree with the president’s strategy or policy. With that in mind, senior military officials must exercise tact, discretion, and agility when testifying before Congress.

Senior military officers must understand the executive and legislative branches are co-equal branches of the government and, regardless of either’s political ideology, both serve important roles in the employment of the nation’s armed forces. Testifying without whitewashing or misrepresenting the facts should be the goal of all military officers. Congressional leaders have an important right to hear unvarnished analysis about military capabilities and operations. As Nielsen and Snider state, “honest and open testimony to Congress is obedience to a constitutional principle and an officer’s allegiance is not just to the state, but to the democratic nature of the state.”

Avoid Publicly Criticizing Defense Policy and Policymakers

Active-duty officers should not publicly criticize civilian defense officials nor defense policy. To do so is a form of insubordination and disrespect that may undermine the authority of the civilian leader and the confidence other servicemembers have in him or her. Once a senior military officer has provided complete advice to civilian leaders, the military officer must trust the civilian policymaker to make the best decision possible. Furthermore, it is against Article 88 of the Uniform Code of Military Justice (UCMJ) for officers to use contemptuous words against the president, the vice president, the secretary of defense, or the civilian service secretaries, and they may be subject to court-martial for speaking in a derogatory manner about civilian leaders. The rule is designed to maintain discipline within the military services and ensure subordination to civilian authorities.

Remaining respectful to civilian counterparts is easier to do in theory than in practice. Tensions between military and civilian officials are normal as they wrestle with difficult decisions regarding force employment, budget, acquisitions, and operations. Disputes over military courses of action are common, and civilian officials often opt for strategies that run contrary to the military leadership’s recommendations.

Senior military officers have been fired from their posts or forced to retire for making disparaging remarks about civilian leaders. In June 1993, Air Force Major General Harold Campbell was forced to retire after calling President Clinton a “dope smoking, draft dodging” Commander in Chief.16 Admiral William Fallon, commander of US Central Command from 2007–08, was forced to retire early when he spoke critically and publicly against the Bush administration’s policy toward Iran. General Stanley McChrystal was forced to resign after his personnel staff made derogatory comments about civilian leaders in the Obama administration.17

Even If Retired, Avoid Criticizing Civilian Defense Officials

The sixth principle is the most debated. Should military officers remain apolitical once they retire from active-duty service? Retired senior military officers continue to wield political influence and are normally held in high esteem by the public. Hence, conventional thinking is retired officers should avoid criticizing defense policy or civilian defense officials just as they did while on active duty.

Following retirement, however, they are technically civilians, and unlike their active-duty counterparts, no Department of Defense regulations prohibit them from openly criticizing civilian defense officials. Certain categories of retired military personnel are still accountable under the Uniform Code of Military Justice though prosecutions are rarely pursued. Following the January 6, 2021, attack on the Capitoll, in which many retired and active-duty military servicemembers participated, this policy is in the spotlight again.

During the 2016 presidential election, retired Marine Corps General John Allen campaigned for Hillary Clinton, and retired Army Lieutenant General Michael Flynn spoke at the Republican National Convention in support of Trump. The political advocacy of these and other retired officers prompted former Chairman of the Joint Chiefs of Staff General Martin Dempsey to write an editorial in the Washington Post reminding retired military officers “they have an obligation to uphold our apolitical traditions.”

Furthermore, retired former senior military officers frequently become defense-policy guest experts on news shows. Their observations as “military analysts” carry weight even though they do not officially represent the Department of Defense. Retired officers can criticize current defense policy, or they can become paid advocates for the same defense policy to bolster public support for an administration’s defense strategy.

Trump’s rhetoric during the 2016 presidential campaign drew criticism from several retired officers before the November 2016 election. In March 2016, about 122 senior foreign affairs officials—eventually labeled “never Trumpers”—signed a letter stating in unequivocal terms that Trump was unfit to hold the office of the president. In August 2016, an additional 50 officials signed another public letter declaring him unfit.

One of the first retired flag officers to criticize Trump was Admiral William H. McRaven, former commander of Special Operations Command. In February 2017, a little more than a month after Trump’s inauguration, McRaven said, “the President’s attack on the media is the greatest threat to our democracy

In my lifetime."21 In August 2018, McRaven wrote a scathing Washington Post editorial criticizing Trump for what he considered unethical and truculent policies, stating, “Through your actions, you have embarrassed us in the eyes of our children, humiliated us on the world stage and, worst of all, divided us as a nation.”22 While he was referring to the revocation of the security clearance of former Director of National Intelligence John Brennan, he was also upset about some Trump policies—the Muslim travel ban, the revocation of security clearances of former officials who had criticized the president, his referral to the press as the “enemy of the state,” his unexplainable support for Vladmir Putin, and his backing of White supremacists in Charlottesville, Virginia.

McRaven—at least, initially—was one of the few retired officers to castigate the president publicly. For example, following his resignation as secretary of defense on December 20, 2018, retired General James Mattis was reticent to speak out against the president.23 He preferred to remain silent and honor the time-bound tradition of retired military officers not criticizing the president or secretary of defense, claiming, “You need to give the people [in the Trump administration] as much opportunity as possible to defend the country . . . without me adding my criticism to the cacophony that is right now so poisonous.”24

Mattis defended his reluctance to abandon his political neutrality. “You don’t endanger the country by attacking the elected commander in chief,” he said. “I may not like a commander in chief one fricking bit, but our [democratic
election] system puts the commander in chief there." 25 He resigned a day after the president announced an abrupt troop withdrawal from Syria, a decision contrary to the advice of top military advisers who were not consulted by Trump nor informed of the decision before the public announcement. Trump later walked back the decision when Chairman of the Joint Chiefs of Staff Milley persuaded him to leave a smaller force of US Special Forces in the area. In his resignation letter, Mattis wrote the president has, “the right to have a Secretary of Defense whose views are better aligned with yours on these and other subjects, I believe it is right for me to step down from my position.” 26

Execute Legal Orders

As Huntington wrote, “When the military man receives a legal order from an authorized superior, he does not hesitate, he does not substitute his own views; he obeys instantly.” 27 Military officers must comply with orders from civilians even if they have reservations about the logic of the command and whether it is militarily prudent. Obedience is one of the principal pillars of military norms; one can disagree but not disobey.

Military officers have several unprofessional tactics, although contrary to military obedience, they can use to ignore or block a superior’s orders. Richard Kohn lists a few them: taking an inordinate amount of time to comply with the command, leaking information to the press in the hopes public exposure will force the withdrawal of the order, getting congressional leaders involved, or purposely failing to complete the task in an effective manner. 28

Refuse to Execute Illegal Orders

The final fundamental principle considers the options military officers have when given illegal orders. To many military officers, refusing to follow illegal orders may sound like a simple, black-and-white decision: military personnel must not abide by orders that are illegal. However, what constitutes “illegal” is often ambiguous and confusing. Subordinates who receive dubious orders may

find it challenging to determine if the order is truly contrary to an established legal precedent. The legality of an order may be much more nuanced than a clear delineation between legal and illegal orders that are easily distinguishable to the junior party.

Certainly, there are some orders that should not be obeyed: intentionally killing civilians, mistreating prisoners, torture, unnecessarily destroying civilian property, using human shields, rape, and hostage taking, for example. These incidents constitute war crimes and are illegal in accordance with US law, the Geneva Conventions, and customary international law. Clear violations of the principles of armed conflict (humanity, moderation, discrimination, and military necessity) should also be rejected, although there is much more subjectivity in these definitions. Some non-derogable human rights are never permitted to be suspended or denied under any circumstances.29

The strict codes of military obedience and discipline implicitly discourage juniors from questioning orders. According to Article 92 of the Uniform Code of Uniform Justice, it is a crime to disobey a lawful order, and doing so during wartime is punishable by death. Rosa Brooks, former Department of Defense senior counsel, asserts the military’s culture of obedience and subordination to civilian leadership inhibits the military’s ability to reject illegal orders.30 Brooks observes, “Officers rarely respond with a flat-out ‘no’ when senior civilian officials start playing fast and loose with the law.”31 Soldiers are more likely to defer to the orders of superiors rather than question their legality, especially during times of conflict when hesitation could mean operational failure or risk to one’s unit.

To understand the propensity of military personnel to defer to senior officials, consider the following example from recent US military history. When the Bush administration chose to use torture against detainees in Iraq and elsewhere in 2003—a decision that clearly violated international and US law—military officers raised objections that such actions were illegal and unethical. Yet, no military servicemembers refused the orders, resigned in protest, or raised the

29. Patrick Paterson, *The Blurred Battlefield: The Perplexing Conflation of Humanitarian and Criminal Law in Contemporary Conflicts* (Tampa, FL: Joint Special Operations University, March 2021), 15–16, 27; and see also Non-Derogable Rights and Freedoms under Article 4(2) of the International Covenant on Civil and Political Rights, Article 29(2) of the Universal Declaration of Human Rights (UDHR), and articles 27(1) and 27(2) of the American Convention on Human Rights.


issue with congressional leaders. Despite serious reservations about illegal orders, they followed the orders of their civilian superiors.32

If a civilian superior insists a military officer comply with an illegal order, what options are available? The servicemember has three choices. First, comply with the illegal order. Second, agree to follow the order but move slowly, hoping someone intervenes to correct the situation or the incident gets resolved before action is required. Third, refuse to follow the order and keep a clear conscience.

The first option, compliance—even if one suspects the order is illegal—is the default option under normal circumstances. For reasons explained previously, military officers often do not have, nor are they expected to have, a comprehensive understanding of the many factors that may have gone into the decision-making process followed by civilian officials.

If an officer chooses incorrectly and complies with the illegal order, he will have to live with his conscience and any subsequent investigation that might find him morally or criminally complicit in an illegal action. If the officer knows the order is illegal and decides to comply with it regardless, he could be intentionally committing a crime. The defense, “I was only following orders,” is not a valid justification and has been rejected in many famous military trials, including the Nuremberg Trials, the trial of William Calley for the 1968 My Lai Massacre, and the trial of military guards at the Abu Ghraib detention facility in Iraq.

The second option, agreeing with the order but failing to comply with it, is counter to the military values of obedience and discipline. “Shirking” or “slow rolling” is also considered insubordinate because officers are expected to comply with orders promptly without delay.

The third option is for the officer to refuse the order and explain to the person who issued the dubious command why he will not comply with it. To make that weighty decision, he must have knowledge about why the action is illegal. This raises a requirement to educate military officers on ethics and actions forbidden by law (for example, war crimes or crimes against humanity). Recent incidents demonstrate at least some US servicemembers do not clearly understand those issues.33 In sum, professional military officers must

have a significant level of ethical and legal awareness to perform their jobs effectively and honorably.

The subject of resignation comes up frequently in these instances. Some civil-military scholars believe resigning is a form of protest that could undermine civil authority. According to Kohn, for example, there is no place in a professional military for resignations in protest. In nearly all cases, military officers should always “salute and obey.” Anything other than an officer’s unconditional compliance with orders could subvert the military obedience critical to good order and discipline. According to Kohn, “nothing would undermine (the civil-military balance) more than a resignation by a senior military officer.” For this reason, “there is no tradition of military resignation in the United States, no precedent—and for good reason,” he wrote.34

Throughout US military history, few (if any) senior military officers have resigned to protest civilian defense policy. General Milley, during testimony to Congress, explained the military’s perspective:

As a senior military officer, resigning is a really serious thing and it’s a political act if I’m resigning in protest. It would be an incredible act of political defiance for a commissioned officer to just resign because my advice is not taken. This country doesn’t want generals figuring out what orders we’re going to accept and do or not. [Enlisted service members] don’t get a choice to resign and I’m not going to turn my back on them. They can’t resign, so I’m not going to resign. If the orders are illegal, we’re in a different place, but if the orders are legal from civilian authority, I intend to carry them out.35

Conclusion

Neither civilians nor military officers should blindly defer to the other. Both groups have important expertise to contribute to security solutions that often require a whole-of-government response. The interrelational chemistry must be sufficiently healthy to permit a constructive civil-military relations dialogue.

To ensure all senior military officers understand the liberties and limits of apolitical armed forces, service war colleges should teach these functional guidelines. It is necessary but insufficient to examine only the theories and histories of US civil-military relations. Practical codes of behavior supported by real-world examples are essential to illustrate the complex relations with civilian decisionmakers. This article is not a siren’s call for a politically active military.

35. General Mark Milley, testimony to Senate committee, September 28, 2021.
It is the opposite. The guidelines proposed here are meant to help the next generation of senior military officers successfully navigate Washington’s contentious political environment.

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Interrupting Bias in Army Talent Management

Danielle Holt and Susan Davis

ABSTRACT: This article addresses the impact of diversity, equity, and inclusion on talent management. It explains how systemic bias impairs the US Army’s ability to harness cognitive diversity. It stresses the value of cognitive diversity among teams and senior leadership and how cumulative bias impacts the entire career cycle of an individual. It concludes by offering practical suggestions to reduce bias in the assignment, promotion, and selection processes.

Keywords: diversity, equity, inclusion, talent management, unconscious bias

The modernization of US Army talent management must include the development of a more innovative and inclusive culture to meet future threats. The Army ethic represents the primary advantage over near-peer adversaries, requiring processes and transparency in senior leadership selection to reflect the diversity of the Total Force. Future threats will blur the lines between competition and conflict and physical and cognitive warfare. The volatile, uncertain, complex, and ambiguous environments of the future will require the Army to harness its collective cognitive diversity to achieve situational awareness and create narratives of purpose. All will require flatter, highly innovative, and inclusive teams to integrate team capabilities and talents.

Unconscious bias within assignment and evaluation processes is a potential threat and an opportunity for enhanced meritocracy. Assessments should move toward the identification of desired knowledge, skills, and behaviors and the evaluation of potential using relational analytics. Army talent management must foster the selection of cognitively diverse leaders who demonstrate competencies of confident humility and mental agility to generate organizational psychological safety. Only by leveraging the complete scope of diversity through an inclusive culture will the Army be able to prevail in the cognitive dimension.

The year 2020 marked a significant shift in Army personnel management as the service embraced a series of changes (including officer assignment) using a regulated, market-based approach and command selection through a series of standardized, in-person assessments. The impetus for change included growing concern over attracting people to and retaining them in an all-volunteer force,

increasing reliance on innovation in the growing knowledge economy, and the maintenance of economic and technical competitive advantages over near-peer adversaries. In acknowledging people as the “greatest strength and most important weapon system,” the Army has sought transformational change to attract and retain the talent best suited to meet the nation’s future threats.

The Army has embraced talent management transformation amid the backdrop of a global pandemic that has altered the way Americans work, and the Army has done so amid civil unrest that has resulted in part from systemic racism. As the Army embarks on personnel management modernization, the service risks unintentionally amplifying systems of inequality that may impede diversity, equity, and inclusion (DEI) in a values-based organization. Addressing DEI in the selection of senior leaders is critical in both interpreting and influencing the cognitive dimension of the information environment. The cognitive dimension encompasses how senior leaders perceive, evaluate, and ultimately act on information. Confronting prospective systemic threats that arise from potential biases within talent management offers opportunities to create a more inclusive Army culture.

Future talent management processes will use big data and artificial intelligence to optimize promotion, assignment, and leader selection at the individual rather than cohort level. In the practice of people analytics, data can be used to predict markers of success and drive human resources practices to become more evidence-based. Automated systems and algorithms that leverage data are also prone to the biases of the humans who developed them; thus, caution is advised at every step of process development.

The Case for DEI in the Army

Whereas other services place a premium on technology and warfighting platforms, people represent the essential component of future Army multi-domain operations. Rather than rigidly managing personnel with predetermined career timelines, new Army talent management practices capitalize on individual knowledge, skills, and behaviors (KSBs) and preferences using a more flexible career model to accommodate changing household structures and demographics. The workforce has shifted to include more women, dual-career households, single parents,
and racial and ethnic diversity. A 2019 demographic profile showed 53 percent of active-duty Army servicemembers were married, 5 percent were in dual-military marriages, 41 percent had children, and 5 percent were single parents, reflecting a variety of household structures differing from the traditional nuclear family. Talent management processes should support, to the greatest extent possible, a wide range of changing family concerns, such as spousal employment, health care, childcare, and education.

The composition of military servicemembers reflects the shifting demographics of the US population. As discussed in the 2020 New York Times article “African-Americans Are Highly Visible in the Military, but Almost Invisible at the Top,” minority groups remain underrepresented in the officer ranks compared to the enlisted corps. Underrepresentation is attributed to decreased matriculation at the service academies, preferences for noncombat arms specialties, a lack of mentors, and episodes of racism and extremism within the military. Data indicate 71 percent of officers and 52 percent of enlisted personnel reported as White, 11 percent and 23 percent reported as Black, 8 percent and 18 percent reported as Hispanic, and 7 percent and 5 percent reported as Asian in the active-duty Army. At the most senior levels, disparities increase, with general officers reported as 84 percent White, 9 percent Black, 3 percent Hispanic, and 2 percent Asian. Considering gender, women make up 14 percent of enlisted personnel, 19 percent of officers, and 11 percent of Army general officers.

A 2012 RAND study found Black and Hispanic officers were promoted at lower rates than White officers, particularly at the O-4 to O-5 level, suggesting the field-grade officer step represents a key promotion milestone. The same RAND study found female officers are less likely to be promoted at the O-2 through O-4 ranks, which coincides with childbearing years. With future US demographic trends predicting a minority-White population in 2045,
individuals whose backgrounds include two or more races are expected to grow by 226 percent. Consequently, the non-White, multiracial population will represent the “primary demographic engine of the nation’s future growth.”

A case even more compelling than simple representation or changing demographics is the Army’s requirement to create shared understanding and mutual trust to enable mission command. As a values-based organization, the Army necessitates diverse, equitable, and inclusive work environments. The Army ethic reflects the core values and beliefs that guide the “conduct of Army professionals bound together in common moral purpose.” The Army ethic is codified legally in the US Constitution; the Uniform Code of Military Justice; Titles 5, 10, and 32 of US Code; and the Oath of Commissioned Officers and morally in the Declaration of Independence, creeds, mottoes, and the Universal Declaration of Human Rights.

To maintain the trust of the American people and demonstrate the accountability of the nation’s institutions, the selection of senior Army leaders requires transparency. Confidence in the military as an institution—typically rated as one of the most trustworthy organizations—decreased from 70 percent in 2018 to 56 percent in 2021, with the greatest decline in individuals under the age of 30. Millennials (people aged 25 to 40 in 2021) and Generation Z (people aged 6 to 24 in 2021) increasingly value DEI. Forty-seven percent of millennials, the largest and most diverse generation in the US labor force, considered DEI an important factor in choosing a job, whereas only 33 to 37 percent of people over the age of 40 did so. Generation Z, representing incoming military recruits, valued increasing racial and ethnic diversity as a positive social trend.

Diversity can refer to both demographics and thought. Diversity of thought, termed “cognitive diversity,” may arise from variations in background, experience,
and perspective. One framework for diversity consists of primary dimensions, such as age, sexual orientation, physical abilities, race, gender, spiritual beliefs, and class, and secondary dimensions, such as work experience, geographic location, education, first language, cognitive style, and political beliefs. Everyone possesses a unique combination of dominant and nondominant primary and secondary dimensions of diversity. Varied nondominant attributes across teams generate shared understanding of lived experiences, which builds trust in an inclusive environment. Cognitive diversity enables different approaches for gaining understanding of, analyzing, and solving problems. Cognitive diversity can be defined as “differences in information, knowledge, representations, mental models, and heuristics.”

Cognitive diversity empowers mental agility within the current operational environment. Teams with cognitive diversity collectively possess a variety of analytical tools for enhancing problem solving in response to current and future threats in volatile, uncertain, complex, and ambiguous environments. Racial injustice, income inequality, and political polarization threaten trust in the ability of democratic institutions to resolve conflict and equitably provide public services. Technology allows for the rapid dissemination of information, increasing individual empowerment either for good or for bad, while social media amplifies collective group identities and identity politics. According to General Martin Dempsey, US Army retired, the digital echo resembles an echo chamber consisting of information that reinforces established beliefs while dismissing conflicting data. The digital echo can distort information and situational awareness, making the interpretation of information by leaders critical to creating narratives of purpose and meaning.

The future operational battlespace will likely include multiple dimensions. Cyberwarfare increasingly moves armed conflict from the physical space to the cognitive. In addition, hybrid warfare blurs conventional and special operations while technological advancements create weapon systems with instantaneous effects, resulting in convergence across domains. Convergence—or the creation of simultaneous effects—demands cognitively diverse and inclusive

teams able to integrate actions rapidly across multiple domains. Success will be determined by both victory in the physical domain and the timely ability to craft narratives of purpose and to identify critical information deftly across the spectrum of competition to conflict. The cognitive dimension of the information environment “encompasses the minds of those who transmit, receive, and respond to or act on information” that is largely influenced by elements of the primary and secondary dimensions of diversity. In creating desired effects to gain dominance, the cognitive dimension “constitutes the most important component of the information environment.” Within the cognitive dimension, the Army ethic represents the decisive advantage in multi-domain operations and separates the United States from near-peer adversaries. Thus, to ensure mission success, the Army must address potential barriers to achieving cognitive diversity by considering processes that select, assign, and offer developmental opportunities.

Unconscious Bias Constrains Cognitive Diversity

Heuristics and unconscious bias complicate the selection of cognitively diverse teams. Heuristics represent mental shortcuts that enable decision making. The two systems of decision making are “fast,” snap judgements and “slow,” voluntary deliberation, referred to as System-1 thinking and System-2 thinking, respectively. Driven by emotional and situational cues, System-1 (fast) thinking involves impressions or intuitive thoughts. System-2 (slow) thinking entails focused concentration to derive solutions methodically. As a result of System-1 thinking, everyone has unconscious biases that are reinforced to varying degrees by their cultures, experiences, and environments. Time-restricted or time-pressured conditions such as combat increase one’s reliance on System-1 thinking to make decisions intuitively with incomplete information.

In a talent management context, System-1 thinking contributes to four heuristics that impair critical thinking: priming, affinity bias, confirmation bias, and the representativeness heuristic.

• Priming is the triggering of thoughts or emotions that may subconsciously affect candidate assessment or selection (for example, endorsement prior to assessment).

• Affinity bias causes people to select others with similar attributes (for example, selecting someone because he or she matriculated at the same university).

• Confirmation bias serves to reinforce previously held beliefs about the attributes of successful applicants (for example, selecting a candidate because other members from his or her branch have been successful).

• The representativeness heuristic estimates the likelihood of a candidate’s success based on stereotypes such as physical fitness alone. The combination of these heuristics that unintentionally and often negatively influence decisions over time. Common stereotypes reflect assumptions surrounding both observable attributes and invisible attributes, such as race, gender, sexual orientation, age, physical ability, and job role.

The accumulation of biases toward nondominant attributes at every decision point over the course of a career exponentially impacts senior-leader selection in a closed talent management system. These often-unintentional slights are insidious and difficult to control without systematic processes in place. As an example, the removal of photos from the board process may help reduce unconscious bias toward gender, race, or body type on the day of the board. Simply removing photos, however, does not fully eliminate the unconscious bias that may have impacted assignment opportunity, evaluations, and schooling, highlighting the importance of talent management system design throughout the career life cycle.

Organizational cultural norms hamper the building of cognitively diverse teams. Individuals in nondominant or stigmatized groups often downplay their group identities by altering their appearance or behavior, changing their manner or the content of their speech, or avoiding talking about their personal lives. These individuals engage in this behavior to assimilate into or maximize the comfort of the dominant group. This phenomenon is referred to as “covering” or “code-switching.” Whereas authentic self-expression within accepted military

34. Gvosdev, Blankshain, and Cooper, American Foreign Policy, 18–22, 274.
norms and culture allows for the full employment of individual talents, covering wastes energy better spent innovating, collaborating, and problem solving. Code-switching decreases performance, weakens commitment to one’s organization, and contributes to burnout. The challenge lies in continually reassessing military norms that unnecessarily result in code-switching or worsening conditions for nondominant groups. The change in acceptable hairstyles due to disproportionate alopecia or hair loss in Black women due to tight hairstyles, such as a bun, is an example of a reassessment.

Examples of how cultural norms and stereotypes may continue to drive individuals in nondominant groups to cover and assimilate into the dominant group abound. Although lesbian, gay, bisexual, transgender, and queer servicemembers can now serve openly after the ban on transgender individuals was rescinded in 2021, many may still feel the need to cover in the context of a predominantly cisgender, male, heterosexual population. Women, who can now serve in any Army branch, still often face a double bind when displaying leadership traits traditionally stereotyped as masculine, like ambition and dominance and risk, and expose themselves to a likeability penalty for not displaying communal traits, such as compassion and helpfulness. Women may also face gender hierarchy threat because research shows female officers are more likely to receive lower performance ratings from superiors close to them in rank than their male peers. Although tremendously positive, policy changes allowing qualified soldiers (regardless of gender, race, or sexual identity or preference) to serve in all aspects of the Army only represent the first step in fully assimilating and harnessing the cognitive diversity of all servicemembers.

Although the Army supports DEI principles, it is also vulnerable to the discrimination and fairness paradigm in which an organization focuses on demographic representation within a code of conformity. The discrimination and fairness paradigm inadvertently overlooks the competitive advantage of cognitive diversity, hinders the speaking of truth to power, and undermines organizational learning. The Army expression “I only see green” invalidates visible differences and disregards the unconscious bias that has systematically

led to underrepresentation. According to Sergeant Major of the Army Michael Grinston, “I just see green” ignores differential treatment of soldiers when they are not in uniform. More importantly, the paradigm silences the conversation necessary for validating the experiences of group identity and incorporating this knowledge into inclusive organizational practices. The art of command lies in simultaneously balancing the tensions resulting from the enforcement of uniform codes of conduct and fostering mutual respect to capitalize on the diversity of thought.

**DEI Structural Models**

Improving DEI requires an understanding of insider-outsider group dynamics in which the insider (or dominant) group has the most power and less awareness of challenges faced by nondominant groups and the outsider group has an acute awareness of insider group norms but less influence for changing or challenging norms without fear of repercussions. The Army addresses diversity with established policies typically emphasized through legal precedents and federal mandates. Programs such as Military Equal Opportunity emphasize education, training, and reporting at the individual level. Successful DEI programs must prioritize the inclusion of all individuals, including insider groups, as part of the solution and limit the extent to which other groups feel like outsiders by creating psychological safety. Mandatory diversity training has been shown to raise animosity toward outsider groups, particularly when the training is perceived as shaming and blaming White males.

Strategic DEI models include policy reviews and diversity councils. The Office for Diversity, Equity, and Inclusion provides policy oversight for the Department of Defense. The Defense Culture Institute, administered by the Office of People Analytics, produces the Defense Organizational Climate Survey, which is routinely administered to help commanders assess unit climate. In 2020, then-Secretary of Defense Mark Esper removed photos from

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consideration by selection boards. Esper also established the Defense Advisory Committee on Diversity and Inclusion in the Armed Services to mirror the Defense Advisory Committee on Women in the Services, established in 1951.

Highlights from the Defense Advisory Committee on Diversity and Inclusion in the Armed Services report include robust recommendations to monitor demographic trends in performance evaluations, ensure diverse pools for nominative positions, standardize human resources data for analysis, and release demographic data from promotion board results. Implementation of these practices would be a step in the right direction. The Army is leaning forward on these issues through Project Inclusion, the service’s strategic DEI plan introduced in 2020. In addition to removing Department of the Army photos, the service plans to redact race, ethnicity, and gender data from Officer and Enlisted Record Briefs; conduct listening sessions; and review military justice cases for racial disparities.

Systematic organizational approaches are most notably missing from current DEI initiatives targeting either the interpersonal or strategic level. Grinston’s “This Is My Squad” initiative builds cohesive teams at the tactical level. The DEI annex of the Army People Strategy outlines the strategic goals of leader commitment, talent management, organizational structure, training and education, and equitable and inclusive environments. To inform the way ahead and operationalize these strategic goals because work is increasingly performed by teams, the Army should consider organization-level dynamics and relational analytics.

- Organizational dynamics addresses how information is shared, how teams are constructed, how influence is applied through networks, and how cross-functional groups interact.

- Relational analytics describes how human social networks contribute to forming ideas, changing behavior, completing tasks, creating silos, and forming critical human links and nodes to accomplish organizational missions. Both approaches will assist

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52. DoD Board on Diversity and Inclusion, Diversity and Inclusion Report.
the Army with identifying organizational actions to reach the established strategic goals.

Traditional workplace inequities stem from a dominance model in which certain characteristics such as race, ethnicity, sexual orientation, and gender identity are preferred. Dominance models can also emerge in functional areas, where some professional backgrounds are routinely favored, stifling contributions from people in less-favored functional areas. A strong cultural preference exists for leaders from combat arms branches; this preference likely stems from the view combat arms officers are best prepared to lead large-scale combat operations. Present-day conditions, however, suggest the growing complexity of future operations along the spectrum of competition to conflict. The COVID-19 pandemic, the global supply-chain crisis, worsening climate change, and disruptive technology are a few challenges the Army may face in the operational environment of the future.

Multi-domain operations will require leaders with diverse backgrounds and knowledge both to lead and to collaborate effectively in a cohesive environment. Currently, almost 70 percent of general officers come from occupations related to tactical operations, creating the potential for engaging in groupthink about complex problems. Operations across land, sea, air, space, and cyberspace require dominance in the physical, informational, and cognitive dimensions. Multi-domain operations necessitate cognitive diversity and require reassessment of the composition of the desired skill sets, experience, perspectives, and backgrounds of strategic leaders.

Leader attributes should be identified through KSBs and deliberately sought out in the talent management processes. Considering power models to help define these attributes is beneficial. Two models of power are the dominance or “power-over” model and the functionalist or “power-with” model. According to Melanie Joy, power-over behaviors prioritize the leader’s self-importance at the expense of the team, resulting in followers experiencing shame. Toxic and counterproductive leadership styles directly “prevent diversity numbers from improving.” Power-with dynamics include earning trust through actions that benefit the group, emphasize humility, and recognize the worth of all group members. Leaders must rethink and interrupt System-1 (fast) thinking while

60. Brown, Inclusion, 113.
reinforcing power—with behaviors that are characterized by confident humility.\textsuperscript{61} Individuals with the most power need to do the most rethinking about design that inadvertently but systematically favors one group over another in a values-based organization. This rethinking would place the responsibility on Army strategic leaders to consider whether talent management processes support the assignment and selection of cognitively diverse leaders throughout the career life cycle.

**Assignment Distribution Design**

The Army must target the cumulative effect of unconscious bias that leads to visible disparities between the Army’s senior leaders and the Total Force. The new Army Talent Alignment Process (ATAP) modernizes talent management using an information-driven, market-based approach that considers soldier and unit preferences.\textsuperscript{62} Units are expected to advertise and provide job descriptions and desired KSBs, and officers are expected to complete an accurate résumé and interview in a manner comparable to practices in the civilian job market.

As designed, the ATAP may succumb to the same forces that contribute to underrepresentation among nondominant groups (for example, minorities and women in civilian-sector leadership positions) if the process is not used within a deliberately inclusive organizational framework. Currently, neither organizational leaders nor soldiers have fully developed skill sets for fostering optimal hiring practices and interview techniques. The ATAP User Agreement explicitly prohibits questions about age, gender, religion, sexual orientation, and marital or family status and recommends standardized, behavior-based questions.\textsuperscript{63}

The biggest concerns acknowledged by the Army Talent Management Task Force about the ATAP market system included diversity, nepotism, and variable performance distribution across units.\textsuperscript{64} In the context of DEI, employing processes that consistently evaluate and transparently report the selection of a diverse slate of officers is crucial. Without processes to counter unconscious bias, units and leaders are prone to favoring officers they know, look like, or with whom they share similar backgrounds. To enhance organizational performance and enable inclusive environments, the Army


needs processes that force diversity and interrupt the tendencies resulting from unconscious bias.

Leaders can take practical steps to promote diversity and mitigate unconscious bias. Officers charged with selections should consider two or more individuals from underrepresented groups when they rank a list of potential candidates. Candidates should be transparently scored to allow for objective comparisons, which help leaders to employ methodical, System-2 (slow) thinking.65

As the identification of KSBs matures, cognitive diversity could be assessed by the combination of KSBs, demographics, education, and assignment history. The Army could use artificial intelligence to review job descriptions for language that may reflect the bias of the writer or deter underrepresented groups from applying. The Army could require units to transparently publish the number and composition of applicants considered for career-enhancing positions. The current market system requires regulation to prevent gaming of the current business rules.

Data usage and transparency are essential for understanding the impact of unconscious bias and holding organizations accountable for equitable selection processes. In a future ideal system, leaders and organizations would be informed by modern people analytics to understand the diversity needs of their organizations.66 Preferable to subjective assessments, data-driven personnel selection can identify top performers. Leaders responsible for selecting officers should receive education and training on conducting interviews, creating objective evaluation criteria, and assessing and selecting soldiers to meet organizational cognitive diversity gaps.

The Army’s Command Assessment Program executes a comprehensive battery of evaluations to assess talent for command positions while taking measures to minimize bias. First implemented in 2019 for the Battalion Command Assessment Program, the four-day, in-person program evaluates candidates across five dimensions: verbal communication, written communication, physical fitness, cognitive and noncognitive skills, and manner of past performance reflected on the Centralized Selection List order of merit.67 A panel conducts double-blind interviews of the candidates behind a screen to limit unconscious bias related to race and ethnicity.68 Panel members participate in antibias training just before the initial interview process and receive a shorter refresher

each day they serve on the panel. Individuals who have previously worked with candidates are asked to complete the Army Commander Evaluation Tool, which is intended to reflect fitness for command and identify counterproductive behaviors.

These processes (double-blind interview, bias training, and anonymous peer and subordinate feedback) are notable examples of processes put in place to combat bias and should be considered best practices. The Army should consider formally implementing a shortened version of the Army Commander Evaluation Tool at frequent career milestones to identify leaders who are most effectively leading in a manner consistent with the Army ethic. Aggregate demographic information of selected officers should be published for all selected commanders. Transparent practices engender trust, allow for the assessment of diversity needs, and further the mission of the organization.

Performance Evaluation Design

Performance evaluations reflect the largest threat and greatest opportunity related to unconscious bias. The officer evaluation report—specifically, the senior rater narrative and forced distribution components—play a primary role in selection boards for professional military education (PME), command, and promotion. Performance evaluations in the private sector have been shown to reflect the biases and tendencies of the rater more than the performance of the rated officer, with 62 percent of the variance accounted for by the rater and 21 percent by the rated officer. Tim Kane, author of *Bleeding Talent* and *Total Volunteer Force*, both of which fueled congressionally directed talent management initiatives, argues evaluations “are one of the weakest categories of talent management for the military” because inflated evaluations do not provide enough granular information to differentiate individuals for promotions or assignments. Army officer evaluation reports have open-ended components that have a forced distribution influenced by the size of the rating pool. Favoritism shown by the rater, senior rater, or the organization, or the conflicting loyalties of these entities, may influence these components. Open-ended evaluations that lack predetermined assessment criteria have been shown to be most prone to bias.

The Army should consider replacing open-ended statements of performance with assessments of an officer’s strongest KSBs, as demonstrated

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by performance. Predefined measures of performance and desired KSBs must be created, either universally to address the attributes and competencies described in *Army Leadership and the Profession*, Army Doctrine Publication 6-22, or by the rater and distributed at initial counseling. Employing more frequent, standardized performance assessments; transparency in expectations; and aggregate consistency checks across populations would interrupt bias and shift Army processes toward a true meritocracy.

During World War I, the US military developed a “merit rating,” or forced distribution, system that served as the basis for performance appraisals, a practice largely abandoned by corporate America over 15 years ago. 72 Employee performance has been shown to decline when an employee is rated relative to others (also known as “social comparison”) and to improve when the employee’s performance is compared to his or her previous performance (also known as “temporal comparison”). 73 The US Air Force, US Marine Corps, and US Coast Guard have abandoned forced distribution rankings; only the Army has kept the practice. 74 As work in the knowledge economy increasingly becomes team-oriented, peer feedback is critical for leader development. 75 By the early 2000s, many US companies prioritized agile leadership techniques that emphasized “individuals and interactions over processes and tools” and “responding to change over following a plan” to enhance innovation. 76 Adaptability requires performance evaluations to align with team-based performance.

In the Army’s current officer evaluation report, the senior rater describes an officer’s potential by comparing the officer to his or her contemporaries and assessing his or her potential for Headquarters Department of the Army boards, such as PME and promotion. 77 Instead of the senior rater recommending selection for PME, it should be widely accessible via distance learning to the greatest extent possible to accommodate competing professional and personal demands, such as deployment or family considerations. Selection for in-person or degree-producing PME could remain competitive by including application requirements. Since many courses require passing a physical

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fitness test, temporary physical limitations such as injury or pregnancy—events that facilitate the furthering of one’s education—should not hinder participation in PME.

Objectively defining future potential is difficult and particularly prone to bias if aggregated data and sources are not used. Senior-rater evaluation of potential should incorporate data-driven assessment, such as peer feedback and temporal comparison, rather than evaluation against peers. Evaluation Reporting System, Army Regulation 623-3, defines potential as judgment about whether the soldier can perform at a higher responsibility or grade. According to Claudio Fernández-Aráoz, Information Age potential requires a learning orientation and the ability to “adapt and grow into increasingly complex roles and environments.”

Evaluations need to move toward assessing subordinate leader development, a leader’s learning orientation, and the leader’s ability to build networks as fundamental leadership competencies. Key metrics for potential include behaviors and attributes demonstrated both to supervisors and to peers and subordinates. These behaviors and attributes include motivation, curiosity, insight, creativity, engagement of networks, and perseverance and determination. Senior raters may apply relational analytics to assess the strength and diversity of an individual’s network and ability to exert influence outside of the organization. Codified as an essential leader competency in Army Doctrine Publication 6-22, one who extends influence beyond the chain of command creates shared purpose through negotiation, consensus building, and conflict resolution—skills critical for creating an inclusive environment.

Psychological Safety for Inclusive Talent Management

The processes for assignments, command selection, and evaluations can interrupt bias, but, ultimately, inclusion reflects a sense of belonging built through mutual trust and psychological safety. Diversity inherently introduces conflict through differences in perspective. Whereas people experience trust at the individual level, psychological safety exists at the organizational level.

In The Infinite Game, Simon Sinek explains the relationship between performance and trust. Team members with high performance and low...
trust characterize typical toxic or counterproductive leadership styles. Today, Army evaluations reflect performance and one person’s estimation of future performance in different environments. The evaluations prioritize short-term accomplishments rather than long-term soldier development, engagement, and sustainability. More easily assessed than trust, performance can hide leadership traits employed to generate team performance and simply reflect technical competence. Trust, in contrast, stems from leader integrity, honesty, and accountability for the good of the team. Brené Brown emphasizes the importance of trusting others to respect boundaries and demonstrating reliability, accountability, confidentiality, integrity, nonjudgment, and generosity to establish belonging.83

Belonging also requires organizational leadership that creates psychological safety to benefit from cognitive diversity fully. Amy Edmondson describes psychological safety as an environment in which individuals are “not hindered by interpersonal fear” preventing them from sharing information or ideas.84 Psychological safety involves establishing a culture in which people can ask questions or discuss mistakes without experiencing shame or humiliation. It is not about being nice or lowering standards; rather, it is about the maintenance of high standards in an honorable environment, which, in turn, promotes high-quality performance and reduces risk.85

Conclusion

Changing workforce demographics and justice imperatives in a service-oriented, values-based organization make inclusion and diversity in talent management an Army-mandated requirement. Solutions to complex problems in future, multi-domain operations will demand success in the physical, informational, and cognitive dimensions, making diversity and inclusion in talent management synonymous with achievement of the Army’s mission. Mission command requires maximizing the human potential to thrive in ambiguity through shared understanding and mutual trust. Organizational leaders must be primed to interrupt bias by ensuring consideration of diverse slates, standardized interview processes, and use of predefined metrics or criteria for assignments and evaluations. Data analytics will be needed to assess aggregate trends across subpopulations and to verify internal consistency, and transparently published board results will provide organizational accountability. These changes are needed to

85. Edmondson, Fearless Organization.
ensure DEI within the Army are reflective of the doctrinal Army ethic, and ultimately allow the Army to retain top talent and prevail in the cognitive dimension.

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Rethinking Female Urinary Devices for the US Army
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ABSTRACT: As women assume more combat roles in the US military and continue to operate in austere environments with varied mission sets, the Department of Defense must rethink its approach to equipment and uniform development to accommodate female anatomical differences. This article analyzes the results of a study conducted during the Sandhurst Military Skills Competition at the United States Military Academy to determine the effectiveness of commercial off-the-shelf products the Army has adopted to aid female urination—products used by competition participants that may not be the best or healthiest options for women.

Keywords: urology, female urinary diversion device, women, inclusion, combat

In 1943, the Women's Army Corps passed into law and allowed women to enlist or commission in the Army with all the rank, privileges, rights, and benefits of their male counterparts. Although legislation is a good start, the soldier archetype cannot be legislated. It is forged through the practices and traditions of the organization. While the Army has taken steps to transform the soldier archetype to include women, much room for improvement exists.

Army women, like men, must operate in uniforms, protective outer garments with weapons, hydration gear, and communication devices among predominately male peers and leaders. While uniform accommodations have been made for men concerning the location of the button fly on all trousers and the design of undergarments, current uniforms impede urination for women. As a result, women limit fluid intake to avoid the embarrassment of the common female stance (the squat position), and adjust their tolerance level of privacy and discretion.1 Experts have observed in austere environments with

limited facilities and close proximity to others, the common female stance is humiliating, dangerous, and hard to accomplish.2

Although limiting fluid intake allows Army women to restrict the need to urinate in the field, they face potential health consequences such as the risk of urinary tract infections, incontinence, vaginitis, and other infections of the urethra and possibly the kidneys.3 The Program Executive Office Soldier and the Natick Soldier Systems Center recognized these health threats and provided a commercial off-the-shelf solution: female urinary diversion devices (FUDDs), which became available in the Government Services Administration inventory around 2015 or 2016 as women were being filtered into combat arms positions once coded for men. This exciting development started with cultural support teams who augmented special operations units to fill the critical limiting gap of leveraging Afghan women in the fight against Islamic extremism in Afghanistan.4 Research also points to sustaining the inclusion of women in combat arms as more evidence reveals the “band of brothers” contrived exclusions have no merit.5 Still, relatively few resources and little attention have been paid to the issue of female urination or the equipment hastily accepted to deal with the long-standing problem.

The Freshette and Shewee urinary devices offered solutions to the problems experienced by females in the field. They were added in response to good customer reviews from the outdoor adventurist community and had not been systematically tested for ground troops in military field training or deployed conditions to validate their effectiveness or level of acceptance.6 The Freshette was previously studied by military personnel as a solution for aviators and a way to reduce the damaging effects of limiting fluid intake and delaying fluid voiding.7

4. Ellen Haring, review of Ashley’s War: The Untold Story of a Team of Women Soldiers on the Special Ops Battlefield, by Gayle Tzemach Lemmon, Parameters 45, no. 2 (Summer 2015).
A 2012–16 survey that analyzed the Freshette with a sample size of 94 deployed military women during Operation Enduring Freedom resulted in the recommendation of implementing this FUDD for use in austere environments. While the study provided much-needed data on one model, further research and discussion were needed to understand the importance of these devices when integrating women into all dimensions of Army life.

Based on the sustainment of women in combat arms positions, our research team evaluated these commercial off-the-shelf products for their ability to facilitate easy and comfortable female urination and sustain combat effectiveness. As a doctoral candidate at the University of Miami, Lieutenant Colonel Andrea Peters conducted a series of studies on female urination in austere environments with an eye toward transforming policy into practice. Her research affirmed prior work that identified this topic as a key concern for women in both combat and support services.

Her findings revealed urinary aids influenced the reduction of urological infections, however, female soldiers and Army leaders lacked awareness and education on the benefits of these devices. These results propelled the study team to understand why there is a lack of education and employment and how the team could apply human systems integration to improve urogynecological health and mental well-being, thus making women more effective teammates. The goals of the Sandhurst study were to build on previous studies, take them a step further by outlining empirical evidence to influence and develop device-use policies, provide a standard for future product analysis, and to serve as a model for the design and development of products that will better meet the needs of female servicemembers in a variety of operational environments.

Policy Background

Women have officially served in the US Army with equal benefits and protections since July 1943 under the Women’s Army Corps and have trained and aided in all types of Army units in limited capacities from the Medical Service Corps to special operations. These limited military occupational specialties excluded women from combat arms roles and branches like infantry, armor, and field artillery. While the early 1990s saw the expansion of women’s roles in the military, including serving on combatant ships and piloting combat aircraft, the Military Leadership Diversity Commission observed women were still marginalized due in part to long-held assumptions

8. Steele, “Female Urinary Diversion Device”; Steele and Yoder, “Military Women’s Urinary Patterns.”
that women would negatively affect unit cohesion and were more prone to physical and mental limitations in combat. In March 2009, the Defense Advisory Committee on Women in the Services discussed the policy limiting the roles of women in combat arms, the individual experiences of the soldiers, and the implications of changing these roles. Attendees, both officer and enlisted, argued women were already serving in combat and the role limitations only caused divisions within units that are supposed to thrive on cohesion.

In the process of reviewing legislation, policy, and perceptions of the operational environment, the Military Leadership Diversity Commission discovered the lack of both empirical data correlating female fitness requirements and battlefield performance and supporting research on the increase of female mental-health issues when compared to male servicemembers. When Sergeant Leigh Ann Hester stood her ground in a firefight in Iraq (she later earned the Silver Star for her achievement) and the female engagement teams and combat support teams made impactful gains in Afghanistan, the military and the US government were reminded of the combat potential of women. The women’s actions and accomplishments served as the impetus for the Army to examine how it might provide opportunities for women to serve in combat roles.

In 2013, the Department of Defense opened all Army branches to women, and in December 2015, another historic decision opened all combat roles previously coded male to women. In 2016, Acting Secretary of the Army Patrick J. Murphy demonstrated the new policy also represented a shift in the attitude of military leadership. He stated, to the Army and the world, that women are capable of performing every job in the Army to the highest standards. He also recognized the critical role leaders hold in integration.

The Army’s change in policy and attitude necessitated updates to infrastructure, regulations, education, and practices to integrate women fully into the Army. Although conceptually realized, the updates and implementations were—and are—slow due to a lack of attention, budget limitations, and time.

constraints. Women, however, still face the problem of how to urinate in the field safely and effectively. While the inclusion of women in combat has renewed conversations on the subject, women across multiple force sustainment branches (formerly combat service support branches) have dealt with the lack of equipment for their most basic needs. These concerns arose as early as 1775 when women served unofficially as cooks and nurses in the Revolutionary War. Health-care officials serving during Operation Enduring Freedom testified to the lack of urinary accommodations for women on foot marches and convoy missions—and even in unit base designs.

A safe and practical method of urination has been a primary concern of female servicemembers for decades. While the Army has shifted its attitude toward women in combat, it has failed to address the fundamental role female urinary safety plays in fully integrating women into the ranks. Thus, the following sections evaluate the FUDDs the Army has already approved to assess their effectiveness.

Materials and Methods

The study team leveraged the United States Military Academy autumn squad lane competition, referred to as Sandhurst, to address the lack of systematically focused field tests regarding female urination tools and practices. The annual competition consists of 36 teams, with approximately one female cadet on each team. The teams face challenges that closely mimic real combat scenarios.

Female participants were informed of the study and participated in an information session where they could ask questions and handle the devices. The women returned for a second session where they could ask more questions, pick up devices (Freshette and Shewee), and select operational camouflage trousers of their choice—either the unisex trouser traditionally issued to men and women or the alternate more formfitting trouser with elastic in the waistband and a shorter button fly. Participants were also asked to consent formally to the study, though this step was not required by the institutional review board.

A total of 16 women, ranging between 18 to 22 years old, picked up devices; 15 women returned the devices after the competition, and 14 women completed the closeout survey. Additionally, to provide more insight to Army leaders, the study team carefully analyzed pre- and post-swabs of the devices to determine the propensity of bacteria growth and the resulting implications.

18. Steele and Yoder, “Military Women’s Urinary Patterns.”
Variables

Prior to Sandhurst, the female cadets selected either the Freshette device or the Shewee device. The outcome variables below were measured via a survey using a Likert scale to understand the women's attitudes and opinions toward the new devices.

- Overall satisfaction
- Durability
- Design
- Size
- Ease of use
- Color
- Ease of cleaning
- Compatibility with unisex trouser
- Ease of storage
- Compatibility with alternate trouser
- Carrying case

The scale consisted of seven response options ranging from extremely satisfied to extremely dissatisfied. The seven options allowed a midpoint of neutrality and a more straightforward approach to removing incomplete and inaccurate information due to system or respondent errors.20

Field Use: Sandhurst Military Skills Competition

On October 18, 2019, study participants began the competition in tactical formations for an 18- to 24-hour grueling competition. The Sandhurst Military Skills Competition dates to 1967 when the Royal Military Academy Sandhurst exchange officer presented the United States Military Academy with a British officer’s sword to use as a competition prize. Academy leadership, eager to provide the corps of cadets with a regimental-skills competition that would enhance professional development and military excellence in basic soldier skills, developed the competition with the award being the British officer’s sword.21 Upon inception, the goal was to train and compete to enhance teamwork and to shoot, move, and communicate effectively in combat situations.22

Each competition area tests a different aspect of small-team combat operations and creates stress to stretch the participants—just like combat missions do in a deployed environment. The lanes and events include functional fitness, the M9 pistol range, the M203 grenade-launcher range, zodiac water course, land navigation, bivouac, night tactical road march, obstacle course, leader’s reaction

22. “Sandhurst Competition.”
course, rifle marksmanship, call for fire, combat swimming, and a burden—a small-team, critical-thinking event that also called for strength and agility. Upon completion of the competition, 15 participants returned devices to the study team to analyze the pre- and post-bacterial activity on the devices and extension tubes using Mueller-Hinton agar plates divided into fours and cotton-tipped swabs soaked in Luria-Bertani (LB) media (most common medium to grow bacteria) to swab each device and inoculate the dishes. The dishes were incubated for 24 hours, and microscans were completed to identify bacteria, if present.

Survey Results

The survey results yielded an overall positive response, ranging between extreme dissatisfaction and extreme satisfaction and revealing room for improvement of the devices. Specifically, 50 percent of the respondents were moderately satisfied with the overall device, design, and durability; however, 57.15 percent indicated they were between slightly satisfied to slightly dissatisfied in the ease of storage. A total of 76.92 percent of the respondents wanted improvements in the carrying case. The Freshette came in a plastic bag that was too small to handle effectively when urine coated the device, and the Shewee had no ventilation for the case.

Additionally, the responses revealed more negative opinions when using the devices with the operational camouflage trousers. Seven women (58 percent) were in the midrange of opinion when using the device with the unisex trouser and four women (57 percent) when using the alternate trouser. Participants expressed mostly negative opinions about the ease of cleaning, with 43.34 percent ranging between slightly satisfied to moderately dissatisfied. Their responses indicated a need or desire to wash these devices and more guidance on how to do so effectively. The Likert scale responses were confirmed through qualitative responses and analyzed through affinity clustering. Analysis revealed nine out of 14 (64 percent) women washed their devices by rinsing with sink water, flushing with canteen water, or using soapy water. The graphical representation of the female Sandhurst competitors’ satisfaction levels in figure 1 (below) provides a visual representation of the opinion data.

23. Ophardt and O’Connor, “2021 Seven Things.”
Figure 1 confirms the primarily positive response of having the urinary aid. It also shows the range of opinions and indicates there is room for improvement to adapt the devices specifically for military use. The affinity clustering of the survey’s qualitative data revealed requirements for the resizing of the collection cup and spout angle due to the urine splash and cup compromise, developing a carrying case for ease of storage, altering trouser design due to limited anatomical access, using proper cleaning solutions, and providing education due to the current lack of availability.24

The preliminary swabbing of the Shewee tube resulted in one colony forming unit consistent with *Staphylococcus* spp., while post-swabbing of the devices revealed more interesting and concerning results.25 The post-microbial swabbing occurred for eleven Freshette devices and four Shewee devices upon completion of the competition. The resulting number of device types were based on the women choosing the device they liked best or were most comfortable using. The results revealed one Freshette device with possible *Lactobacillus* (normal female bacteria flora) species of 1000x gram stain and another device with possible gram-positive *Corynebacterium* (a normal skin bacterium). The most concerning findings were discovered on one Freshette and one Shewee device. A 1000x gram stain on a blood agar plate, revealed possible *Proteus* spp. (swarming bacterial species), a common cause of urinary-tract infections.26 The microscan confirmed the

presence of the swarming bacteria and further analysis revealed the bacterium also forms biofilms. The most concerning finding was the identification of *Proteus mirabilis* isolates resistant to tetracycline, piperacillin/tazobactam, and aztreonam while the other isolate was only resistant to tetracycline.

### Implications for Integration

Genuine integration and equity occur gradually within organizations as psychosocial change must strike a balance with existing physical support systems. Integrating women into the military is similar; however, the understanding and updating of tools, policies, and procedures to meet the needs of the female anatomy have been seriously neglected. The Freshette and Shewee devices seem to answer the long-standing concern of how to facilitate female urination in austere environments by providing a tool pioneered by and designed for outdoor adventurists.

The Army must reevaluate the efficacy of these devices for soldiers as military women are deployed operationally. Thus, the one-size-fits-all approach will not work as an enduring solution due to time constraints and varied mission sets ranging from foot marches to mounted tasks. The Sandhurst study helped provide attitudes and opinion data concerning the FUDDs and illuminated the possibility of resulting infections from device usage, thereby posing a major concern for open and free use of FUDDs without redesign or specific education on proper sanitation. In particular, the devices must be reevaluated for basin size, spout angle, carrying case accessibility, and, most importantly, for proven antimicrobial features. Currently, the limited cup volume can cause urine to splash or sit on the body causing moisture-associated skin damage and irritation.27

Additionally, both the unisex trousers and the alternative trousers complicate usage since neither account for the position of female anatomy. If the Army deems it more feasible to maintain the current General Services Administration inventory devices and trousers, leadership can consider a twofold approach that will allow quick wins and the ability to protect and enhance the female force while working toward the broader goal of a more-inclusive Army culture. The approach must address policy and procedural changes from the larger Army perspective and most important, this cultural shift will happen because lower-level Army leaders buy into the concept and its execution.

Recommendations for the Army

The following recommendations for the Army will help update policy and procedures to aid in female inclusivity and safety as a forethought—not an afterthought.

- Provide all female soldiers with a urinary diversion device.
- Update the *Common Table of Allowance 50-900, Clothing and Individual Equipment*, and the *Organizational and Clothing Individual Equipment* lists to reflect the issuance of the urinary devices that can be replaced every two years based on need.
- Update packing lists to include these devices as an inspectable item.
- Provide natural cleaning wipes and spray with every issued urinary device and allow the reissue of these expendable items throughout the year.
- Teach women in basic training about the devices and proper vaginal and urinary-tract care in garrison and in less-than-ideal environments.
- Update current *Field Hygiene and Sanitation*, Training Circular 4.02-3, to educate the force, both males and females, on urinary-tract infections, their development, their possible impact, their treatment, and their prevention.28
- Normalize the use of urinary aids for women and for all military members in cold-weather climates to afford a more expedient and safer means to urinate in dangerous temperatures. The aid may even be a useful tool for both sexes for nuclear, biological, and chemical situations, but research must be done to validate this assumption.

The above recommendations meet the Army where it currently stands and will help the service prepare for the 15 percent female force that continues to populate previously male-coded positions. The Army’s return to combined-arms maneuver and wide-area security, combined with the increased number of women within combat positions, requires a strategic approach to providing the appropriate tools and equipment for women in these environments. Furthermore, the recommended steps highlight the fact that bacteria inhabit all regions of the world, and bacteria are a perennial threat for military forces during training and deployments regardless of sex.29 The reexamination of female needs and desires

will ultimately provide force multiplication and reduce the unnecessary cognitive and physical load on women, their teams, and their leaders.

Although the above top-level recommendations are for the Army, command teams can also influence education and change in the psychosocial approach to female urination tools and procedures. As previously stated, cultural changes cannot be legislated; instead, they must be adopted and implemented within organizations. For a fully inclusive Army culture to take root, Army leaders must embody a broader perspective and command style. This shift in perspective will also alter behaviors and influence positivity to the lowest ranks as more cohesive and supportive teams are crafted and nurtured.

Army Leader Recommendations

The points below are a continuation of recommendations specific to Army leaders to help them influence cultural and cognitive shifts in perspective. The assumption is the uniform and current equipment resources remain constant. Leaders can begin the shift by ensuring unit surgeons, medics, and lower-level leaders of both sexes are educated on the use and care of devices. Because of the nonautomatic nature of acquiring FUDDs, leaders will need to purchase these devices from the General Services Administration inventory to ensure female servicemembers have adequate tools to lessen the safety concerns of urination in austere environments and ease inconvenience.

Once Army leaders are trained and devices are received, units must:

- Provide in-depth use and cleaning instructions for females within the formation
- Educate leaders on the proper integration within the formation to lessen the negative stigma some women have experienced concerning the use of an assistance device.
- Educate users on the varied uses within hardstand latrines, mobile latrines, and open-field conditions.
- Educate or reinforce the user’s knowledge on vaginal health and the proper care of the device.
• Account for all team members when a tactical stop is integrated into movement plans and plan for female urination which includes personal and device sanitation. These stops will take longer for females with or without urination aids. Leader time hacks should account for the frequency and the length of time needed for the entire team whether in training or executing a real-world mission.

Conclusion and the Study’s Broader Significance

The full breadth of the study team’s research, not just Sandhurst, revealed alarming issues concerning women, urinating, urination devices, and the attitudes of male counterparts. Although the specific examples below deal with urination situations, the occurrences paint a bigger picture of the state of the Army’s prevailing male dominance mindset.

A participant during the preliminary research studies revealed how she was forced to urinate between two vehicles in the middle of a busy road in Iraq, responding jokingly that half of Iraq had seen her bare backside. Though amusing, what impact could this situation have had culturally on how Iraqis view Americans and furthermore, women? There were accounts of a woman taking tactical pauses with her unit and the unit leaving her behind, not realizing she was still urinating due to being out of sight from teammates. In a real-world mission, this woman could have found herself left behind and cut off from her team in potentially dangerous territory. In casual conversations, some cadets have mentioned comments made by male counterparts of “you want to pee like a man,” or “what is that” as the woman is urinating that precede excuses like “it was just a joke and you’re being emotional.” Additionally, when women were asked how they feel about urinating in close proximity to men, most replied they were uneasy and embarrassed but have “sucked it up and drove on.”

The latter mindset is why women have been successful in the military and specifically the Army. Their desire to succeed and their resilience in operating within a noninclusive culture propels them forward. While females continue to seek success by any means available, the Army has been slow to provide structurally safe opportunities as revealed by the comments provided above and others revealed in previous studies.

If the military is serious about executing the Army People Strategy, leadership must recognize the achievement of strategic goals such as readiness,

30. Peters, “Female Urination Austere Environments.”
32. Peters, “Female Urination Austere Environments.”
diversity, professionalism, and full integration will require the Army to acknowledge the key role women play whether that acceptance includes providing more command opportunities or better accommodation of urination needs. By exploring an often-ignored subject, the study team revealed the lack of full-system integration concerning clothing, equipment, tools, and most importantly, people. The study engaged qualitatively and quantitatively, showing the lack of resources crafted for women, including Army attempts to fit commercial-off-the-shelf devices to female soldiers, which violates proper user-focused design thinking. The study also exposes the psychological gaps in understanding and execution as related to women fitting into an organizational system designed for men that has not been redesigned for the needs of women. Redesigning does not equate to lowering standards or weakening the approach. Instead, redesign will enhance a unit’s combat effectiveness.

Future research can help support enhanced readiness by examining the impact of field environments on the female system. Building on the work outlined in this article, future researchers should consider examining the effects of dehydration on the female system, delayed and/or restricted voiding and the effects on the female body, how to improve uniform design for urination and defecation in the field, FUDD sanitation, menstruation in austere environments while using the FUDD or another aid, and other health areas that could enhance or potentially hinder female performance during operations. Additionally, small–team dynamics or interoperability should be studied to provide data points of successes and areas for improvement psychosocially concerning the addition of female members in previously all–male units. Further evaluation will create a better understanding of the natural areas of integration and the more challenging areas that may need additional support in shifting the perspectives and attitudes of both men and women to foster a climate of trust, understanding, and dependability.

Although the Freshette and Shewee devices give Army women an alternative option to the common female stance they should not be considered an end to the conversation about female urination in the military. As this study shows, both devices may be susceptible to swarming bacterium that also causes biofilms and is resistant to some urinary–tract infection antibiotic medications due to its gram-negative composition. These findings and recommendations are the start to more in-depth research and how leadership can provide Army women with a better, more reliable solution that will not inhibit their combat effectiveness. The translation of this research into actionable strategies for effective cleaning, user instructions, device and uniform alterations, and Army personnel education

is an example of how the military should approach new tools, equipment, and clothing with an eye to the full integration of female soldiers.

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China’s Global Monopoly on Rare-Earth Elements

Gustavo Ferreira and Jamie Critelli
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ABSTRACT: This article delivers a novel economic analysis of US dependence on China for rare-earth elements and sheds light on how Western nations may exploit “limit pricing” to break China’s global monopoly in rare-earth element production and refinement. This analytical framework, supported by a comprehensive literature review, the application of microeconomic and industrial organization concepts, and two case-study scenarios, provides several policy recommendations to address an important foreign policy challenge for the United States.

Keywords: economics, rare-earth elements, China, limit pricing, renewable energy, defense

The rise of China as a global economic and geopolitical superpower is arguably the most important foreign policy challenge the United States has faced since the end of the Cold War. Disputes between the two countries have been geoeconomic in nature and revolve around issues such as trade imbalances, limited market access, intellectual property theft, and currency manipulation. At the same time, there is growing concern the two nations are on a path to military confrontation and may not be able to avert the Thucydides Trap—the tendency for conflict when an emerging power threatens to displace existing hegemonies.

Following an escalation of diplomatic tensions, former President Donald J. Trump launched a trade war in 2017 to pressure Beijing to implement significant economic reforms and tackle unfair trade practices. As a result, the two nations imposed tariffs worth hundreds of billions of dollars on one another’s goods. More recently, the COVID-19 pandemic revealed the risks associated with the concentration of goods production (for example, personal protective equipment or medical supplies) in China and heightened concerns about China weaponizing supply chains for geopolitical purposes. These growing tensions also revived US concerns about its reliance on China as a primary source of rare-earth elements (REE) and rare-earth element–based products (for example, oxides and associated alloys).

Many critical military applications and industries use these elements as an input to produce advanced electronics, hybrid vehicles, wind turbines, magnets, and catalysts. More than a decade ago, pundits sounded the alarm on China strengthening its dominance in the industry via its vast reserves and
unparalleled ability to mine and refine these resources. A 2010 Government Accountability Office report presented sobering statistics about China’s dominance at all levels of the REE supply chain—the country produced about 95 percent of the raw materials, 97 percent of oxides, and about 90 percent of the metal alloys. From a military perspective, the report stated the US dependency on a potential adversary for critical resources could shape the outcome of a military confrontation. For example, in a large-scale, prolonged military conflict with Beijing over a dispute in the Taiwan Strait or South China Sea, the US military industrial complex could find itself struggling to secure the supplies needed to remain fully engaged in the fight.2

An early economic model explained how China emerged as the production market leader. Through a sequence of four supply-and-demand models, the model showed the gradual concentration of the REE supply chain in China.3 This article expands on this model and focuses on the use of limit pricing by China to preserve its hegemony. The country’s state-owned producers recurrently dialed up production and flooded global markets with cheap supplies to drive out for-profit Western competitors, preclude the buildup of strategic stockpiles, and discourage recycling programs. This article concludes recent market changes will limit Beijing’s ability to manipulate prices for prolonged periods of time. Lastly, market forces alone will not address the vulnerability. Any policy solutions must involve significant and close cooperation with allies and sustained financial and political backing by the US government.

State of Rare-Earth Elements

Over the last decade China has consistently demonstrated its dominance of the REE global market. Following an incident in 2010 between a Chinese trawler and the Japanese coast guard in the contested waters of the East China Sea, Beijing stopped all shipments of these elements to Japan for nearly two months. This decision disrupted Japan’s automotive industry, led to global prices spikes, and generated a global rush to secure supplies. The temporary price surge made it economically viable for previously mothballed mines to reenter the market, exposed the inability of Western nations to fill the temporary gap, and showed China was no longer a reliable long-term REE

supplier; it also failed to persuade the US government and its allies to implement long-term solutions to this dependency.

Consequently, China continued to expand its global dominance and is now confidently wielding it as a geopolitical weapon. For example, in May 2020, President Xi Jinping made a publicized visit to a magnet facility. A few days later, an editorial by Xinhua (the government’s official state-run press agency) warned that by “waging a trade war against China, the United States risks losing the supply of materials that are vital to sustaining its technological strength.”

A month later, Beijing threatened US defense contractors with sanctions following the approval of a $620 million deal to supply missile parts to Taiwan. The PRC’s Ministry of Industry and Information Technology is currently exploring future controls on REE production and exports to the United States and Europe. Chinese officials also reached out to domestic producers to assess how severely US defense contractors would be impacted by a disruption in exports in the event of a diplomatic dispute between the two countries.

A targeted supply-chain disruption could cripple production of consumer products and weapons systems in the United States and its strategic partners. The plausibility of this scenario represents a national security threat and intensifies the debate amongst policymakers and business communities about the United States’ ability to find viable alternatives to sources of rare-earth elements. To that end, the Trump administration published Executive Order 13817, “A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals,” in 2017. It outlines a comprehensive set of policies and strategic goals and pushes for action in research and development, international cooperation, assessment of domestic mineral resources, streamlining federal permitting processes, and expansion of the workforce in this sector. These proposed actions highlight key economic issues that need to be addressed to mitigate the US reliance on China for rare-earth elements. In 2020, the federal government published Executive Order 13953, “Addressing the Threat to the Domestic Supply Chain from Reliance on Critical Minerals from Foreign Adversaries and Supporting the Domestic Mining and Processing Industries,” which directs US federal agencies

to identify potential authorities and develop agency-specific plans to improve the mining and processing of rare-earth elements.7

The Biden administration published Executive Order 14017, “America’s Supply Chains,” requiring the US government to review critical supply chains and assess the country’s dependency on other nations for key resources and technologies—to include “critical minerals” and other identified strategic materials such as rare-earth elements, as determined by the Department of Defense. This policy is likely to endure future political vicissitudes given growing bipartisan calls for a gradual decoupling of the American and Chinese economies. While these policies signal a strong commitment by the US government to address this national security threat, their implementation will take time to progress and will require sustained political backing, reliable financial support by the US federal government, and the involvement of the business community.

Production, Trade, and Uses

Production and Trade

Rare-earth elements are metals desired for unique characteristics of magnetism, luminescence, and strength.8 Contrary to what the name suggests, these elements are abundant in the earth’s crust. Their rarity comes from being scattered, mixed with other minerals, and rarely found in concentrations that make extraction profitable.9 In addition, rare-earth elements are often a by-product of other major mining activities, and reserves are geographically more concentrated than other natural resources (for example, oil or natural gas). Historically, mineral production that is highly concentrated in one or few countries is vulnerable to market manipulations and natural disasters, political changes, or environmental problems.10 China holds 37 percent of the world’s REE reserves (see table 1). Illustrative of the rapid decline of the US industry, in 2009, the

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United States accounted for 13 percent of these global reserves; a decade later, the share was reduced to 1 percent (see table 1).¹¹

Table 1. Geographic distribution of REE reserves (2019)
(Source: US Geological Survey, mineral commodity summaries, 2020)

<table>
<thead>
<tr>
<th>Country</th>
<th>Reserves</th>
<th>Global Share</th>
</tr>
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<tbody>
<tr>
<td>China</td>
<td>44,000,000</td>
<td>37%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>22,000,000</td>
<td>18%</td>
</tr>
<tr>
<td>Brazil</td>
<td>22,000,000</td>
<td>18%</td>
</tr>
<tr>
<td>Russia</td>
<td>12,000,000</td>
<td>10%</td>
</tr>
<tr>
<td>India</td>
<td>6,900,000</td>
<td>6%</td>
</tr>
<tr>
<td>Australia</td>
<td>3,300,000</td>
<td>3%</td>
</tr>
<tr>
<td>Greenland</td>
<td>1,500,000</td>
<td>1%</td>
</tr>
<tr>
<td>United States</td>
<td>1,400,000</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>6,900,000</td>
<td>6%</td>
</tr>
<tr>
<td>World</td>
<td>120,000,000</td>
<td>100%</td>
</tr>
</tbody>
</table>

China has a greater lead in output as it accounted for 68 percent of global production in 2019. This share is likely higher because illegal mining and smuggling by the Chinese are not officially tracked. According to estimates, between 50 to 60 percent of REE production in the country is considered gray/illegal.¹² The Bayan Obo mine in the Baotao province produces 50 percent of China’s rare-earth elements. The Sichuan province accounts for 24 to 30 percent of China’s mining, while the remaining quantities come from the southern provinces of Fujian, Guangdong, and Jiangxi.¹³ While holding large reserves, Brazil and Vietnam mined miniscule quantities of rare-earth elements in 2019. Despite a recent increase in global share from 9 percent in

2018 to 12 percent in 2019 (see figure 1), the United States remains unable to meet domestic demand as it did in the past.

In the past, the United States was self-reliant and the world’s leading REE producer. From the mid-1960s through the 1980s, the Mountain Pass mine—located in California and owned by Molycorp Corporation—was the world’s primary source of rare-earth oxides. Decades of neglect, underinvestment by the federal government and academic community, and gradual losses of knowledge and skilled labor required by this complex industry led to the decline of the industry. The downward trend culminated with the shutdown of the Mountain Pass mine in 2002 following regulatory issues and an environmental incident involving a pipeline spill carrying contaminated water. Consequently, the United States lost nearly all of its production capacity and became a net importer of these compounds and metals, with 80 percent of imports originating in China.\(^{14}\)

**Uses**

Rare-earth elements are used in a wide range of consumer goods such as flat-screen TVs and cellphones. Other important industrial applications are catalysts for petroleum refinement and automotive catalytic converters, wind turbines, and hybrid and electric vehicles, among others. Production in the United States propelled the development of modern military technology, and the new defense applications bolstered the demand for REE inputs in turn, for jet fighter engines, Aegis-equipped destroyers and cruisers, missile guidance

systems, antimissile defenses, satellites, ammunitions, communication systems, etc. An oft-cited example of the interdependency between the defense and the REE sectors is the F-35 fighter jet which requires 920 pounds (417 kg) of these materials. Also, rare-earth permanent magnets and specialized alloys are vital to many military weapons systems. Some of these critical components are exclusively built in China, which represents a threat to national security. Nevertheless, the defense uses of rare-earth elements accounts for a relatively small share of US consumption—between 5 and 10 percent.

As major economies transition to lower-carbon and renewable energies, analysts estimate the demand for rare-earth elements will continue to grow rapidly. Clean-energy technologies, such as hybrid electric vehicles or generators for wind turbines, could consume up to 40 percent of all REE production by 2040. This figure includes China’s growing downstream sector that now accounts for more than 80 percent of total global consumption. The semiconductor industry—another strategically important and fast-growing sector—is also becoming a major consumer of rare-earth elements. Finally, the current lack of alternative sources plays into the growing demand for these elements. When available, substitutes tend to be less effective, and the quantity of recycled rare-earth elements remains limited (for example, materials extracted from batteries, permanent magnets, or fluorescent lamps).

Chinese Dominance in the Global Market

For over five decades, China developed high-profile national programs and devoted laboratories and teams exclusively to the study of rare-earth elements. This long-term focus yielded significant results and set the conditions for the country to expand its output of rare-earth elements in the late 1970s and 1980s. Chinese leaders then declared these elements “strategic” mineral resources and, with the country’s high tolerance for environmental degradation and low cost of exploitation, increased production and exports throughout the 1990s. This increase caused global REE prices to plunge and resulted in many Western mining companies going bankrupt or significantly reducing

15. Morrison, “Trade Dispute with China,” 2.
operations. Beijing shifted toward developing an integrated supply chain in mining, magnets, and other value-added products and declared the development of domestic REE industries a strategic goal under the *Made in China 2025* strategy.\(^{22}\) The PRC now controls most of the global value chain and accounts for nearly 90 percent of global REE refining capacity. In contrast, the United States must export its domestically mined ores to China for further processing because it lacks the refining, alloying, and fabricating capacity. This gap is not due to technological preeminence but rather Beijing’s earlier tolerance for pollution and environmental degradation.\(^{23}\) Production of rare-earth elements comes with an enormous environmental footprint—one ton can generate up to 60,000 cubic meters of waste gas, 200 cubic meters of acid-containing sewage water, and over one ton of radioactive waste.\(^{24}\)

China recently began consolidating its control over the industry to keep prices high, reduce environmental pollution, and grant Chinese processors access to low-cost materials.\(^{25}\) This consolidation is a stark reminder the Western for-profit businesses are not competing on a level playing field. Chinese authorities began setting up export quotas between 2007 and 2014. This policy, however, was not legally binding and many miners continued to exceed their output limits. Also, export restrictions were not applied to finished REE products so China continued to flood global markets with relatively cheap products. In 2014, after years of contention, the World Trade Organization declared these export quotas incompatible with trading rules. Following this decision, the PRC replaced export quotas with production quotas which have remained fairly stable since 2014. The ongoing consolidation of the industry into six state-owned enterprises is also central to efforts to tackle illegal or environmentally noncompliant mining operations.

Beijing also began focusing on ensuring the reserves remain plentiful and established commercial and national stockpiles managed by the China State Reserve Bureau. Since annual production includes stockpiling a share of REE materials, the PRC can impact global markets by manipulating its stockpile levels and influence market prices by increasing or releasing its strategic reserves for a limited period.\(^{26}\) Chinese authorities also attempt to attract foreign investors to establish mining and processing facilities in the country with the lure of access to raw materials, metals, alloys, and the burgeoning Chinese market. Nonetheless, some foreign investors remain hesitant because of technology-sharing concerns.

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Overcoming China’s Control over Market Prices

The surge in prices of rare-earth elements in 2010–11 revealed the vulnerability of Western nations to disruptions in the supply chain and triggered a wave of studies, government reports, and legislative efforts proposing solutions to this dependency. Popular recommendations include increasing and diversifying mining and processing activities, investing in research and development to find substitute materials, and lowering usage intensity or expanding recycling. A 2017 study by Sprecher et al. proposed a framework with mechanisms to improve resilience in supply chains.27 The first step is the diversification of supply by promoting production in different countries or expanding recycling programs. Second, the stockpiling of materials can serve as a buffer against temporary supply disruptions. On the demand side, US manufacturers can develop technologies that reduce usage or allow for substitution. As previously discussed, the Trump administration proposed a multipronged approach to this issue through Executive Order 13817.

These efforts will face important economic challenges. First, investments in this sector are technically complex, take at least 10 years to materialize, and require a hard-to-find, skilled workforce and significant financial resources (typically over $1 billion USD). Furthermore, global pricing is far from transparent and is often affected by Chinese domestic policies. Due to the lack of information on real REE production or break-even costs in China, Western producers find it difficult to price their products competitively. This market uncertainty also exposes investors to prohibitive short-term risks and precludes new investments and the diversification of this supply chain.28 After all, international financial markets have not forgotten recent bankruptcies of US and Australian mining operations. In this market environment, proposed solutions must first recognize the global market is not a level playing field and market-based actors are competing against a state-capitalist economy that subsidizes and controls its domestic sector.

A growing number of industry experts suggest market forces alone will not enable the development of alternative supply chains. Instead, they highlight the need for significant public funding and continued government support.29 This is, in part, because of China’s history of flooding the market with cheap rare-earth elements when it perceives credible competition from other nations. Economists call this behavior limit pricing, and it involves a monopolistic firm reducing its prices to the point where new firms will not be able to make any profit or even enter the market. While this action may lower potential short-term profits

27. Benjamin Sprecher et al., “Novel Indicators for the Quantification of Resilience in Critical Material Supply Chains, with a 2010 Rare Earth Crisis Case Study,” Environmental Science and Technology, 51 (2017), 3860–70.
of the monopolistic firms, it also enables them to maintain their position and long-term profitability. Limit pricing is less effective against new competitors capable of absorbing losses over time. The past financial problems and subsequent bankruptcies of Molycorp and Lynas, however, seem to indicate otherwise. Furthermore, limit pricing is more effective for industries with significant economies of scale. Entry in these types of markets is difficult and limited to a very small number of firms because of the very large required investments.30

The Chinese use of limit pricing impacts Western production and supply chains through three different channels: (1) impact its competitor’s profitability, (2) discourage recycling, and (3) erode the need for building up strategic stockpiles.

Competitors’ Profitability

China can depress global prices and render Western competitors economically unviable by increasing official production quotas or easing the crackdown on illegal mining operations. The Chinese government can also support temporary export surges by depleting its strategic REE reserves. Hence, Western governments and investors must be prepared to endure temporary losses while recognizing the use of limit pricing presents perils for China as well.31 First, Chinese mining companies will provide resistance to lower market prices since this action will lower their short-term profits. Second, China’s economic planners failed to predict the rapid surge in domestic consumption of rare-earth elements and the recent decreases in domestic production that followed the industry consolidation and tougher enforcement of environmental regulations.32 Thus, it is unlikely China will employ price limiting for prolonged periods of time as it would divert valuable resources away from its processing industry. Lastly, surges in production and exports would accelerate the depletion of this nonrenewable resource.

Building a Recycling Program

Levels of reuse and recycling of products containing rare-earth elements remain modest worldwide, and the volume of these elements embedded in existing products or waste streams continues to be a mostly untapped source. This lack of reuse is largely explained by low market prices, logistical complexities, high set-up costs, and negative environmental impacts associated with recycling programs, mainly the use of toxic substances and the large amounts of energy required to separate rare-earth elements from recycled materials.33

31. Smyth, "Industry Needs Rare Earths, 6; and Beattie, “Failure to Diversify,” 4.
A number of federally-supported, ongoing efforts in the United States seek to increase the reuse and recycling of rare-earth elements. As long as Beijing retains its pricing power, however, recycling alone will not close the wide gap between demand and supply in the near future. Thus, the US government and its allies must develop long-term recycling program incentives and exploit alternative sources resilient to temporary price manipulations by China.

Building National Stockpiles

The National Defense Stockpile, established by the US Congress in 1939 (Title 50 United States Code § 98 et seq.) to decrease or avert dependency on foreign sources for supplies of strategic and critical materials in times of national emergency, was designed to store materials for a three-year war scenario and now includes 40 different commodities stockpiled nationwide, including rare-earth elements. Policymakers and pundits argue end users should augment stockpile levels of raw material and REE-based critical components to cope with temporary market disruptions or supply bottlenecks—even if that augmentation means building reserves large enough to sustain production for several years. Procuring and storing large reserves can be a risky and costly decision. For example, Western governments and businesses could capitalize on a Chinese-induced market glut by building up strategic stockpiles at reduced prices. If prices remain low for longer periods of time, however, holding large stockpiles would become financially unattractive. Also, the development of new technologies could render long-term stockpiles obsolete and create significant losses for the holders.

Since military technology requires only limited quantities of rare-earth elements, diminishing supplies from China would not impact the US military complex if the US government and industry maintain reserve levels large enough to sustain manufacturing operations for several years and enough active Western mining operations remain in line. These stockpiles should be part of the US government’s and manufacturers’ risk management strategies and may require public subsidies and international cooperation (for example, development of a multinational consortium on REE stocking that involves multiple NATO countries). The reserves should serve as a temporary tool to absorb short-lived market disruptions until the United States can become self-reliant in mining and processing.

Proposed Long-term Solutions

This section proposes a series of longer-term solutions for Western countries to counter China’s dominance in the global market. These measures are well-aligned with the current market environment where Beijing is unable to use limit pricing as in the past due to its own shortages and recent strategic goals set by the US government (for example, Department of Energy).36

Creation of an Integrated Domestic Processing Industry

An integrated approach will enable the United States to manufacture the component parts needed by the military complex and the emerging green economy. If the United States expands its mining without developing a domestic refining and manufacturing capacity, the country will move its dependency risk along the supply chain. The following two highly probable scenarios underscore the urgent need for building domestic value-added refining, metal production, and alloying capacity in tandem with an expansion in domestic mining.

In scenario 1, China reduces its production and increases its imports. China is now a major consumer of raw rare-earth elements while its domestic production continues to decrease due to environmental and other policy constraints. The country, therefore, will have to increase its imports of REE concentrates or establish mining operations in other parts of the world, which would help them circumvent the negative environmental consequences generated by the industry. Both options will increase global competition for these raw materials and reduce availability for refiners outside China (for example, in the United States). Hence, the development of a US refining industry will inexorably depend on reliable access to raw materials mined in the United States or by its allies.

In scenario 2, China increases its production and decreases its imports. If the PRC increases production and reduces imports, Western mining operations dependent on China as an export market would be adversely impacted. Very few smelters and processors outside the country can produce REE oxides and metals. A US vertically integrated sector would guarantee a stable destination market for Western mining operations and may be the only path to attract the investor financing needed for this risky sector.37 In order to expand its refining capacity, the United States must play catch-up and make significant investments toward rebuilding a skilled labor force and establishing a comprehensive research infrastructure. This step will require political will and significant public spending

37. Humphries, “Rare Earth Elements.”
to develop lasting partnerships between the US government, higher-education institutions, and stakeholders from the mining and financing industries. It is important to remember, Beijing channeled significant resources for decades to develop world-class scientific institutes focused exclusively on researching rare-earth elements. The United States will need to make an equal commitment to regain its first-place standing in the global marketplace.38

*Increased Collaboration, New Procurement Strategies, and New Technologies*

Certain REE materials do not exist in the United States and others are not available in economical quantities, so refining specific rare-earth elements may not be cost-effective domestically. Western nations can address these challenges via public policies, technological breakthroughs, and cooperation. The United States, the European Union, Japan, and Australia began setting up new programs involving coordination and research funding for domestic operations.

At the federal level, as proposed in Executive Order 13817, the Department of Defense can foster collaboration with friendly nations and their businesses by employing mechanisms, such as reciprocal defense procurement or security of supply arrangements, to ensure the widest supply of defense goods and services. These arrangements could expand the participation of allies and strategic partners in US defense procurement processes and guarantee acquisitions of rare-earth elements to meet pressing warfighter and industrial needs. For example, in August 2020, Ellen Lord, Department of Defense undersecretary of defense for acquisition and sustainment, announced the Pentagon was in early talks with Australia to have the country process a significant portion of rare-earth materials for the US military.39 Also, three US and Canadian companies have joined efforts to set up a supply chain using radioactive monazite sands—a mining by-product. This collaboration will integrate the different phases of production, including mining and refinement, and will produce enough monazite to meet half of the United States’ needs.40

End users of rare-earth elements are also key stakeholders who can shape the market through their procurement practices because lower-tier managers often make procurement decisions driven mostly by low-cost considerations, translating to purchases of cheap Chinese supplies. The United States needs a more strategic and coordinated approach to procurement that should involve

chief executives and government agencies. Finally, ongoing efforts to increase processing and manufacturing efficiency would lower material intensity and minimize waste. A new major technological breakthrough in the industry could make an impact akin to the contribution of fracking technology to US energy independence.

**Conclusion**

Rare-earth elements are strategic resources with multiple business and technological applications. Due to China’s global dominance in the market, the US manufacturing and military sectors are vulnerable to potential Chinese political and economic aggression. Control over the supply chains should be an issue of extreme concern for Western nations because it has been for the Chinese government. While the vulnerability of the US military complex often captures headlines and the attention of policymakers, the threat to the economy is much broader and more concerning.

For example, commitments made by US and international automakers to increase the number of electric vehicles in their fleets is gaining momentum. With its vertically integrated supply chain, China now holds over 70 percent of the world’s electric-vehicle battery manufacturing capacity, whereas the United States possesses less than 10 percent of the share. Moreover, Beijing has set the goal to produce 50 percent of the world’s electric vehicles and 50 percent of the world’s hybrid vehicles by 2025. Any delays in the development of alternative REE supplies gives the PRC more time to consolidate its market position and develop new monopolies in these fast-growing economic sectors.

Following the 2010 market disruption and decades of talks, good intentions, and feeble financial commitments, Western nations have yet to change the status quo. This lack of action was partly due to Beijing’s decision to flood the global market with rare-earth elements at subsidized prices, driving out for-profit competitors and dissuading new market entrants. A new window of opportunity is opening for Western businesses as demand for rare-earth elements in the PRC currently exceeds domestic supply. Facing its own shortages, China will no longer be able to use limit pricing as it did in the past. This new market reality, coupled with financial backing from their respective governments, could provide Western producers enough time to emerge. Furthermore, Beijing knows

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42. Yu and Sevastopulo, “China Targets Rare Earth,” 4.
any overly aggressive move it makes will further galvanize its rivals to develop their own production and processing capacities.

Establishing a viable supply chain for rare-earth elements will take years and will require the United States to remain focused on long-term solutions. These efforts should include stockpiling and recycling, increasing domestic production and refining, and investing in joint ventures with trusted strategic partners. In order to succeed, these ventures will require significant public investments and enduring public support. Heavier involvement of Washington in this market may face domestic political headwinds and challenges in the international arena (for example, Beijing leading a complaint at the World Trade Organization). As China continues to lose market power and domestic political backing for REE independence gains momentum, the United States is well-poised to use the defense complex and create cutting-edge industries to break this long-lasting dependency.

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Select Bibliography


Chinese and Western Ways of War and Their Ethics

C. Anthony Pfaff

ABSTRACT: US officials often portray the Chinese government as having few, if any, ethical boundaries in its pursuit of power. This article argues China, like Western countries, has a rich ethical tradition of constraining its use of military power. With a focus on the relationship between ways of war and ethics of war, this article relies on traditional and contemporary scholarship from both the East and the West to highlight differences in how each culture views the practical and ethical aspects of war and how these views can interact. Understanding the ethical logic available to one's rivals can enable US leaders and planners to leverage China's behavior and optimally shape US policies and actions.

Keywords: comparative ethics, just war theory, China, military ethics, strategic competition

The claim that the Chinese government cares little for ethical norms is commonly made in the context of national security. For example, in December 2020, then-Director of National Intelligence John Ratcliffe stated the Chinese government had “no ethical boundaries” in its pursuit of power.1 As Ratcliffe further pointed out, the Chinese steal defense and proprietary secrets; suppress free speech, even outside China’s borders; and regularly bully their neighbors over boundary issues. Thus, the Chinese government’s apparent ethos is, as Ratcliffe describes it, a radical utilitarianism in which the good of the Chinese Communist Party is the only concern. Strategists might further conclude the behavior of the People’s Liberation Army (PLA) in war would be no less constrained.

The fact the Chinese government might not accept US norms, does not mean it accepts no norms. Ethics at the strategic level are about reconciling the demands of national security with the near-universal sentiment of limiting human suffering and the desire to conform to cultural values.2 To understand another culture’s military ethic, strategists must understand how the culture reconciles the achievement of success with those values and how a country’s way of war shapes its ethics of war. Both Western and Chinese strategic traditions regarding armed conflict are rich with strategic and ethical analysis.

In general, a Western way of war emphasizes the imposition of one’s will on an opponent, and the Chinese way of war emphasizes convincing an adversary to accept

Chinese interests. The ethic resulting from the former is one of competing principles, where the task is to eliminate the enemy’s ability to resist while avoiding harm to persons and things not necessary to this resistance and ensuring the least expense of blood and treasure. The ethic that arises from the latter is one of virtue that appears more permissive in terms of means and ends. The ethic, however, deemphasizes destruction and constrains means and ends—in the ideal, at least—by the demands of justice and benevolence.

Both East and West are inconsistent in following the practical and normative principles of these traditions. This article, therefore, avoids assessing how well either side lives up to its traditional ideal. Inconsistency, does not necessarily rob these traditions of their power. Rather, inconsistencies highlight an ideal against which state behavior can be assessed. The US commitment to human rights, for example, was used to criticize the nation’s post-9/11 policies on interrogation and its use of air strikes in Iraq and Afghanistan—criticisms that led to policy changes. China has sometimes proved similarly sensitive. Despite Ratcliffe’s charge that the Chinese government is conducting genetic experiments with its soldiers, the country established a bioethics committee after a researcher edited the genomes of two infants, an act the government also condemned.3

Ways and Ethics of War

Sociologist Martin Shaw describes a way of war as a method of organizing armed conflict that reflects patterns in the practice of warfighting. Ways of war are inherently practical and primarily focused on the threats a security community faces and the tools it has to confront them.4 How these tools are used depends on the security community’s understanding of the character of war, which in turn informs its way of war, which is how it will compete and, when necessary, fight. These choices include how to organize and equip militaries, and they determine which strategies to adopt against a given foe. Presumably, state actors organize their militaries to respond to the most dangerous perceived threat, and, from any national security perspective, these threats (and the responses to them) determine the way of war the security community adopts.5

As an ideal, ways of war inform practice, but they do not determine it. If a country organizes to face its most serious threat, the country will not necessarily use the same capabilities in other contexts. The United States’ commitment of military forces to peacekeeping missions in the Balkans, for example, does not suggest

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the country has changed its view of international competition or warfighting. Moreover, the relationship is not unidirectional. Ethics also inform the way of war. For example, a commitment to minimizing collateral harms, however motivated, can encourage the development of increasingly precise weapons. Understanding the ideal helps strategists see why opponents choose capabilities, strategies, and—most important for this discussion—practical and ethical norms that guide how opponents compete and fight.

**Western Way of War**

Drawing on the Prussian general Carl von Clausewitz’s writings, the US military, (and Western militaries more generally) tends to view the aim of war as imposing its will on the enemy.\(^6\) While the logic of this kind of war is simple in expression, it is difficult in application. A state has imposed its will successfully when the enemy no longer has the capacity to resist and when it eliminates the enemy’s capacity to resist by shutting down the enemy’s combat capability faster than the enemy can eliminate its own. Doing so relies on a strategy of annihilation and attrition that destroys as much enemy military capability as possible.\(^7\)

The existential nature of the threat the enemy poses is another critical aspect of this view. To underscore the close association of existential threat with the Western way of war, Pamela Creed notes how President George W. Bush positioned the 9/11 terrorist attacks as an existential threat that created “character polarities” between the American people (who sacrifice to defend their rights) and the enemy (who was fueled by an “irrational hate” for the American way of life).\(^8\) Rather than adjudicating whether this characterization of al-Qaeda was fair, this description was as much a response to the feeling the United States was at war as it was a reflection of the cultural views of what it takes to win wars.

The point here is not that the United States only goes to war against existential threats. Rather, organizing to fight such a threat shapes the capabilities the US military creates and the strategies it adopts. When conflict arises, an existential threat provides little room for negotiation, leaving little else to do but eliminate the enemy’s ability to resist. This approach closely identifies military objectives with political ones because destroying military capability, in this view, entails victory. This point is important. Imposing one’s will on the enemy does not mean the enemy must adopt new goals. It simply means eliminating the enemy’s ability to prevent the realization of goals.

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Consumption of alcohol is a major risk factor for mortality and morbidity in older adults. Studies have shown that moderate alcohol consumption, defined as one to two drinks per day for women and two to three drinks per day for men, is associated with a lower risk of cardiovascular disease, stroke, and some cancers, particularly breast cancer in women. However, heavier drinking can lead to a variety of health problems, including liver disease, high blood pressure, and alcohol dependence.

It is important to note that the relationship between alcohol consumption and health outcomes is complex and can vary depending on individual factors such as age, sex, and overall health status. Therefore, it is crucial to consider individual circumstances when evaluating the potential benefits and risks of alcohol consumption.

In conclusion, moderate alcohol consumption may have some benefits for health, but it is essential to weigh these benefits against the potential risks, especially in older adults. Health professionals should provide individualized advice based on each patient’s unique circumstances and overall health status.
St. Augustine. Taken together, these conditions constrain when the US military may pursue even a just cause, thus ensuring violence is not committed for trivial or futile ends.

In this view, winning wars emphasizes the destruction of enemy military capability and logically excludes things that do not directly contribute to this capability. Combatants must discriminate between targets associated with the enemy’s military capability and those that are not, and only use force proportional to the value of the military objective. The Western just-war tradition also excludes other things, regardless of how they contribute to enemy military capability, such as hospitals and infrastructure associated with food and water, even if they are used by the military. Justifications for these exclusions include human rights and setting conditions for a better state of peace.

For ethical decision making, the Western military ethic places three imperatives in tension: the imperative to win, the imperative to protect the force, and the imperative to avoid noncombatant and other collateral harms. The imperative to win draws moral justification from the justice of the cause. The imperative to protect the force draws justification from both the conservation of forces from the standpoint of the first imperative and soldiers having the right not to be sacrificed for inadequate reason. Finally, the imperative to avoid harming noncombatants and committing other collateral harms draws justification from the notion that doing so is gratuitous in some cases and unethical in others. Even when excluded things might facilitate the destruction of enemy forces, avoiding them does not prevent it.

The United States and its partners have not always used force as discriminately as their ethics generally require, but violating a norm is different from rejecting it. Normative power is expressed both in terms of compliance and in terms of how others respond to violations. For example, Sir Arthur Harris, also known as “Bomber Harris,” who directed an indiscriminate bombing campaign against German cities in World War II, was “slighted and snubbed” after the war and did not receive the honors others of similar rank and experience did. Moreover, though the names of the fighter pilots who died during the Battle of Britain are inscribed on plaques at Westminster Abbey, the plaques do not mention the Royal Air Force Bomber Command or its crews. In fact, despite conducting indiscriminate bombing campaigns against Japanese cities after the war, the

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United States endorsed additions to the Geneva Conventions that reinforced the protection of civilians as a legal requirement.\textsuperscript{18}

**Chinese Way of War**

Both Western and Chinese views on military matters have a long, complex, and intellectually rich history. Strategists must be careful about reducing these matters to one school of thought, much less one thinker. Nonetheless, just as Clausewitz has an outsize influence on Western thinking, Sun Tzu has the same effect on Chinese thought. Ping-cheung Lo, a contemporary scholar of Chinese military ethics, remarks that contemporary Chinese discourse on *The Art of War* is “dominated by PLA authors.”\textsuperscript{19} Of course, both Clausewitz and Sun Tzu are read in both the United States and China. Sun Tzu’s methods, however, have not informed the US way of war in the same way they appear to have informed the Chinese way.

Western readers are likely familiar with *Unrestricted Warfare*, one of the most prominent applications of Sun Tzu. Written by Chinese then-colonels Qiao Liang and Wang Xiangsui, this book contrasts Sun Tzu with Clausewitz, arguing China should follow an unrestricted warfare strategy because no competitors are able to impose their will on the United States, given its conventional superiority. The colonels call for “using all means, including armed force or nonarmed force, military and nonmilitary, and lethal and nonlethal means to compel the enemy to accept one’s interests.”\textsuperscript{20}

This view would exploit the point where the Western way of war closes the gap between military and political objectives. Since political and military objectives do not have a necessary connection, success depends on bringing to bear other elements of national power and integrating them into the military effort. This feature necessarily draws in nonviolent means of competition that emphasize coercion and deception, which Weber would have referred to as “power,” as opposed to brute force and attrition, which he would have referred to as “domination.”\textsuperscript{21} While brute force has its place, its use reflects a failure of the ideal and, thus, should be the exception rather than the rule.\textsuperscript{22} Moreover, this view connects the nature and quality of civil governance with military capability because the civil government wields the full range of the tools of conflict. In this

\textsuperscript{22.} Lo, “Warfare Ethics,” 122.
context, Confucian writers notably prefaced their works on military affairs with discussions of statecraft.\(^{23}\)

Additionally, each way of war seeks to realize the ends of war differently. In *A Treatise on Efficacy: Between Western and Chinese Thinking*, François Jullien contrasts Western “means-ends” thinking with Chinese “opportunism.”\(^{24}\) Although the term “Western” may not accurately and completely describe US strategic decision making, Jullien observes Western military thinking determines the right objective and then tries to organize the resources available to achieve it. In this way, a general engaging in battle is much like a ship captain undertaking a voyage. As Jullien observes, “[B]oth operate within constantly shifting fields, full of unpredictabilities, to the very end never certain of triumphing over the enemy or making it to port.”\(^{25}\) Success is never guaranteed; friction and chance can always undo the best plans.

According to Jullien, Chinese thinking analyzes a situation in terms of the potential to gain from it. The generals’ role here is to understand what factors promote their interests and then act when those factors align to advance the interests. Sun Tzu captures the difference in chapter four when he states, “The victorious troops thus begin by winning and only then engage in battle, whereas the defeated troops begin by engaging in battle and only then try to win.”\(^{26}\) Put another way, the troops see the potential first, and then they engage to realize the potential. Like Jullien’s description of the Western view, the Chinese view acknowledges some factors will always be uncontrollable. Rather than trying to control or to minimize the factors’ effects on achieving the intended objective, the Chinese view avoids setting a single, discrete objective in the first place and seeks to identify and act on opportunities to improve one’s situation relative to the enemy. In further describing the Chinese view, Jullien states, “[C]ircumstances may often be unforeseen, even unforeseeable, and unprecedented, which is why it is not possible to draw up a plan in advance. Rather, they contain a certain potential from which, if we are agile and adaptable, we can profit.”\(^{27}\)

The approach described here is reflected in Chinese doctrine. In response to superior US conventional capabilities, the PLA employs a concept of *shashoujian* or “assassin’s mace,” an umbrella term that refers to the doctrinal development and acquisition of weapons systems aimed at enabling the inferior to defeat


the superior.\textsuperscript{28} This doctrine relies on surprise and deceptive and unorthodox methods “unknown to an adversary.” The means employed under this doctrine—such as those described above—are intended to achieve the effects of deterring, decapitating, blinding, paralyzing, or disintegrating enemy forces. Interestingly, disintegration in this context refers to breaking down command and control.\textsuperscript{29} “Destroying” the enemy does not make this list. This omission fits into a view that sees the use of force—and the other elements of national power—as a means to limit conflict and avoid escalation to conventional war—which, being the weaker power, the PLA would likely lose.

Paradoxically, a view that seeks to limit conflict can expand the roles force can play. As Zheng Wang argues in \textit{Never Forget National Humiliation}, China’s perceived humiliation by the West serves as a barrier to negotiation and trust and places the West and China in conflict from which they cannot escape. Consequently, future perceived humiliations could paradoxically escalate into war. For example, in 1995 after the Clinton administration permitted then-President of Taiwan Lee Teng-hui to travel to the United States to deliver the commencement address at his alma mater Cornell University, China recalled its ambassador from Washington, rejected the appointment of a new US ambassador to China, and conducted large-scale military exercises. As Wang describes, “A very strong sense of crisis and insecurity has become an important theme of the national political discourse in China.”\textsuperscript{30} Nothing indicates the situation would have escalated to violence; however, the inclusion of the military in China’s response to the perceived political affront underscores the seriousness with which the Chinese take such offenses. Imagining a set of circumstances that would lead to a greater crisis is difficult.

Fear of future humiliation is not the only normative principle driving Chinese foreign policy. Moreover, nothing in this analysis should suggest China’s competition with the United States is motivated by anything but a desire to surpass it as a global power, as described in Jonathan Ward’s \textit{China’s Vision of Victory}, or to establish an international order China considers more favorable, as described in Rush Doshi’s \textit{The Long Game: China’s Grand Strategy to Displace American Order}.\textsuperscript{31} Nor should this analysis suggest China and the United States’

\begin{itemize}
\end{itemize}
views of just order are moral equivalents. However, an ethic exists that can guide both the ends China seeks and the means used to seek them.

**Chinese Ethic of War**

In practice, the PLA grounds its military ethics in Marxist-Leninist ideology, which typically expresses itself as a kind of utilitarianism in which socialism is to be advanced to the maximum extent practicable. Nevertheless, since the 1980s, traditional Chinese thought, especially Confucianism, has found its way back into Chinese civic culture as an antidote to encroaching Western values. Not surprisingly, such thinking has migrated to the military, which has integrated traditional views with its military ethics programs that reflect a socialist foundation with Chinese characteristics. These traditional ethics took shape largely during the Warring States period (475–221 BCE), during which boundaries were in flux, leading to brutal wars as larger states consolidated power. This competition gave rise to schools of thought that asked the question, “Can a nation govern so well that it becomes a great power, and how should it moderate the destruction that works against its great-power status?” Eventually, Confucianism would be established as a kind of state religion that informed how dynasties that consolidated power would govern and fight.

The writing of contemporary PLA scholar Zhao Feng reflects these ethics. Zhao Feng argues for “moral warfare,” in which one seeks to be morally superior to one’s enemy. Such a view may appear on the surface as a particularly cynical form of information warfare. Yet, for moral warfare to be effective, practitioners must make an honest attempt to be moral. If not, they must present a stronger moral case than the enemy does. This observation opens the door to the kind of traditional just-war thinking described above, which, like its Western counterpart, generally favors avoiding aggression and employing means that limit destruction and the loss of innocent lives.

On the surface, an ethic of war based on Sun Tzu’s work seems odd. Indeed, Chinese works on war during the Warring States period often offered no moral justifications for the resort to, or the use of arms, against another state and often argued resorting to war to increase the state’s territory or power was equally

34. Metcalf, “Military Combat Readiness.”
justified as wars of defense.\textsuperscript{37} Sun Tzu’s work falls into this category of amoral analysis of warfare. Of the seven military classics, Sun Tzu’s is best known for the absence of ethical thought and was criticized by contemporary Confucian thinkers for this absence.\textsuperscript{38}

Confucian thought makes an important contribution to Chinese military ethical traditions. For example, Mencius, an early Confucian thinker, condemned aggressive wars intended to expand territory and, in the spirit of the Western concept of \textit{jus ad bellum} (or the “justice of going to war”), “encourage[d] wars of self-defense against aggression” as well as “punitive expeditions” undertaken by rightfully authorized state actors to address a perceived wrong.\textsuperscript{39} The \textit{Spring and Autumn Annals}, believed to have been written by Confucius himself, specifies self-defense, rectifying an injustice, and humanitarian intervention as conditions for a just war while excluding preemption. Also, like Western just-war traditions, these works include conditions such as legitimate authority, right intention, and public declaration.\textsuperscript{40} Unlike the Western tradition, Confucius’s view, at least as expressed in the \textit{Spring and Autumn Annals}, qualifies the granting of permission to go to war with the concept of \textit{ren}, which places an emphasis on humanity. So, even a putative just cause like self-defense may fall short of being moral if its pursuit diminishes human flourishing.\textsuperscript{41}

Mencius advocated for \textit{jus in bello} (or “justice in war”) notions of immunity for noncombatants and limited destruction. Other thinkers, like Xunzi, contributed concepts such as “legitimate authority,” which includes justice and humanity as a prerequisite for this legitimacy—an inclusion compatible with Western views.\textsuperscript{42} Moreover, this justice and humanity extend from the character of the ruler to the conduct of war itself.\textsuperscript{43} In this way, the just (\textit{yi}) and benevolent (\textit{ren}) character of the ruler constrains both when he can fight and how.\textsuperscript{44}

Although this Confucian contribution arose out of concerns that views like Sun Tzu’s did not adequately address ethical matters, the interpretation of \textit{The Art of War} as amoral may not be the best one. Prudential and moral norms are found throughout the entirety of the text. Emphasizing restraint, Sun Tzu argues at the beginning that war should be avoided, but when this fails, one should only rely “on

\begin{itemize}
\item Lo, “Varieties of Statecraft,” 115.
\item Kam-por Yu, “Confucian Views on War as Seen in the \textit{Gongyang Commentary on the Spring and Autumn Annals},” \textit{Dao} 9, no. 1 (March 2010): 104–5.
\item Yu, “Confucian Views on War,” 110.
\item Stalnaker, “Xunzi’s Moral Analysis,” 98.
\item Graff, “Concept of Righteous War,” 200.
\item Lo and Twiss, Chinese Just War Ethics, 8.
\end{itemize}
smart strategies and tactics rather than a display of maximum force.” Moreover, 
Sun Tzu, argues for a way of war that prefers preservation to destruction, 
even when considering enemy formations. Of course, practical reasons for 
preferring preservation exist. As Andrew Seth Meyer observes, Sun-Tzu insists 
“every casualty of battle represents a loss for the victorious commander and his 
ruler: every friendly soldier killed was of course an asset lost, but every enemy 
soldier killed, every enemy provision destroyed, and every enemy fortification 
razed were also potential assets forfeited.”

In this regard, the interpretation of Sun Tzu’s work as “coldly pragmatic” is 
not surprising. His concern was armies consume resources, and, as a result, 
their use of resources must generate more resources than have been consumed; 
otherwise, both war and the state are unsustainable. Understanding the continuity 
between governance and military affairs not generally present in Western 
thought is important. For both Sun Tzu and Confucian thinkers of the time, 
“virtue, benevolence, and righteousness” served a “force multiplier” that increased 
one’s chance for, if not guaranteed, victory. Sun Tzu may have diverged from 
Confucian thinkers on the last point. He saw moral superiority as an advantage, 
but one that was neither a necessary nor sufficient requirement for victory.

Mencius and Xunzi, like others at the time, did see moral superiority as such 
a requirement. Sun Tzu’s preference for restraint seems to arise from previous 
moral commitments to a just and benevolent order, not simply a means of 
effective resource management. Thus, Lo sees Sun Tzu’s ethics as similar to 
those argued for by Henry Sidgwick, whose utilitarian “two-fold rule” insisted 
force should only be used in pursuit of objectives that will lead to victory, 
which serves a just cause—and, even then, only as much as is proportional to 
the value of the objective. Although such an ethic does not fully account for 
all intuitions about the morality of war, it does prohibit attacking purely civilian 
targets and the disproportionate uses of force, regardless of the argument 
made about the overall effect on ending the war successfully. Moreover, as 
Michael Walzer notes, Sidgwick’s rule—and, by extension, Sun Tzu’s preferences— 
at least establishes rules of war exist, which further distinguishes it from 
murder or robbery.

46. Andrew Seth Meyer, trans., The Dao of the Military: Liu An’s Art of War (New York: Columbia University 
52. Walzer, Just and Unjust Wars, 128.
Sun Tzu’s account is not entirely utilitarian in the same way Sidgwick’s is. Maximizing victory in service to a just cause says nothing about the justice of an act. Indeed, a major criticism of Sidgwick’s view is it permits too much: No act, no matter how vicious or indiscriminate, would be impermissible as long as it contributed to victory and the harm that was committed was proportional to the contribution. If strategists accept Sun Tzu’s view is—or at least can be—compatible with the Confucian concerns described, then acts of violence and coercion maximizing a just and benevolent order would be insufficient because these conditions would not stray very far from Sidgwick’s view. Rather, to the extent acts of violence and coercion serve justice and benevolence, they must retain the character of these virtues.

Many of these ideas have been expressed in some form in official Chinese documents. Three scholars from the PLA Army Engineering University pointed out China’s 2013 national defense white paper intentionally promulgated a military ethic centered on the ideas of “justice, peace, and humanitarianism” that drew on both historical and contemporary texts. These sentiments are reaffirmed in the 2019 national defense white paper. Although neither paper specifically references military ethics, each expresses a set of norms Confucius would recognize. Thus, blending Sun Tzu and Confucian views on the conduct of war, strategists end up with an approach that more closely resembles neo-Aristotelian virtue ethics, emphasizing the agent as opposed to the act.

Like utilitarian accounts, virtue ethics do not rule out any act. Unlike utilitarianism, virtue ethics include character traits associated with the human good. This complex idea of human good, often described as “flourishing,” rests on the notion that virtues facilitate the fulfillment of human potential. Thus, these traits would rule out acts that maximize a good, like happiness or interest, if the acts did not also reflect the virtue. Since agents must discern the best way to achieve an end, practical reason is inseparable from virtue. What matters is what the virtuous person would do given the alternatives at hand. If all the alternatives are terrible, then the virtuous person may do terrible things, though the person would generally choose the least terrible alternative.

Similarly, a Confucian ethic requires the authority who wagers war to have the “mandate of heaven,” which requires rulers to possess the virtues of justice and benevolence. Such virtues, when applied to war, may also appear utilitarian in application; however, they are constrained by nonutilitarian, humanitarian concerns associated with the relevant virtue. To the extent such an ethic is followed, it will constrain action where Sidgwick does not. Possessing these virtues requires rulers to subordinate their interests to the good of the people over whom they rule, suggesting an independent standard against which rulers can be criticized. For example, a ruler of the Zhou dynasty putting the interests of his concubine over the needs of his army was seen as a moral failure subject to criticism, if not remorse.

Although Sun Tzu’s ethics may not be as fully developed as those of other thinkers of the time, the privileging of just and benevolent governance as the authority for the use of force suggests his commitment to restraint is not merely pragmatic; rather it rests on a deeper notion of human flourishing. Considered this way, Sun Tzu’s work may be more compatible with Confucian thought than it first appears to be. This notion of restraint harmonizes with an understanding of war that sees its purpose as shaping interests rather than imposing will. Shaping interests requires the adversary to have sufficient capability and capacity to act in a desired way; widespread destruction would undermine this end.

Shifting the emphasis from imposing the state’s will to changing the enemy’s mind means focusing on engaging the people rather than destroying the enemy. Whereas the Western ethic seeks to employ the most force permissible; given the limits of discrimination and proportionality, the Chinese view seeks to use the least force possible given the demands of a just and benevolent order.

**Conclusion**

This article has avoided assessments of how well the United States and China uphold their traditions. The deceptive practices former Director of National Intelligence Ratcliffe complained about may be violations by traditional Chinese standards. The employment of these practices, however, can appear justified, given both their efficacy and their lowering of the chance of escalation. Still, when a government does not adhere to its ethics, it becomes vulnerable to moral critique, which can have practical consequences should the critique undermine the actor’s legitimacy.

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This article should clearly convey Western and Chinese just-war traditions have more similarities than differences. Whatever happens in practice, both cultures rely on long traditions that specify when war is justified and constrain the actions taken in its conduct. In addition, these permissions are similar because they incorporate conceptions of justice and permit war only to promote this justice, and both traditions recognize certain persons and things should be excluded from harm, independent of how this exclusion would impact the chances for victory. To the extent Western and Chinese war-ethics traditions are different, these differences may lie in the Chinese emphasis on humanity and human flourishing that can look like consequentialist reasoning and, when done poorly, likely is. In fact, the Marxist-Leninist ethic, which clearly places the party’s good above just about everything else, is frequently in tension with China’s more traditional ideals, often resulting in catastrophic decisions, such as the one to intern ethnic Uighurs.

This article has focused on ideals within two rich and complex traditions. As a result, the utility of its analysis is limited to the extent the practical and moral traditions discussed here have impacted Western and Chinese views. The literature suggests this impact has been influential in each case. Human difficulty with ideals, however, ensures there will be numerous exceptions to the ideals. Moreover, war is evolutionary, and no way of war or its ethic is static or enduring. Although a way of war like Sun Tzu’sm which relies on coercion and deception, may prevail over one that emphasizes firepower and destruction, a new way will evolve in response. Strategists developing this new way of war will be responsible for ensuring the resulting ethic is one that harmonizes with both the requirement to win and the demands of human flourishing.

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Water Wars of the Future: Myth or Reality?

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ABSTRACT: This article provides background and context for regional trends and historic agreements focused on the Nile River Basin, offers a comprehensive assessment of security challenges, and presents focus areas for future investment and cooperation. The policy recommendations will serve American interests better and improve agricultural practices in the region. Without a marked alteration of existing aid from Western countries, the water-scarcity situation will continue without producing the required infrastructure improvements.

Keywords: diplomatic history, water management, sub-Saharan Africa, Nile River Basin, Egypt

Over the past decade, analysts and writers have captured public attention with dire predictions and captivating headlines, including “Water Wars: The Next Great Driver of Global Conflict?”¹ Population growth is projected to reach nine billion by 2050 and ominous water scarcity statistics center around ecological change and resource shortfalls such as water and food.² Much of the change will occur in sub-Saharan Africa, which will become the second-most populous region in the world within the next decade, following Asia. This area is also home to the largest concentration of “failed states.”³ While the United Nations Development Program excludes Algeria, Djibouti, Egypt, Libya, Morocco, Somalia, Sudan, and Tunisia from the sub-Saharan Africa label, conflict spreads more easily to surrounding states due to their geographic proximity. Population growth will further challenge an already stressed water supply, while the precarious state of governance could exacerbate conflict in the region. The densely populated area along the Nile

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River is home to the majority of Egypt’s population of 100 million people—a number that will grow to 128 million by 2030—and particularly vulnerable.4

This strategic policy article, with a historical twist, draws on the rich history of the Nile River Basin and synthesizes social science studies and environmental and demographic data to examine past and current approaches to water scarcity in the region. Using data from the World Bank and the United Nations regarding population growth, water scarcity, and other trends to highlight frictions behind water demands, it highlights lessons that can be learned from past water agreements to better inform future policy decisions. For this article, countries in the Nile River Basin are Burundi, the Democratic Republic of the Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, South Sudan, Tanzania, and Uganda, and the agreements and policies discussed (that serve as the foundation for successor arrangements) cover these countries. Egypt is the one Nile River Basin country linked to the Middle East that falls outside the designation of sub-Saharan Africa, though it is included.

The analysis is broken into three sections. The first section focuses on the background of the Nile River Basin and regional water challenges, the second section provides context by reviewing historical agreements and present policies, and the third section examines future conflict potential and policy suggestions. Getting all parties as signatories to the 1999 Nile Basin Initiative should minimize intrastate war between countries such as Egypt, Ethiopia, Sudan, South Sudan, and Uganda, particularly regarding water use and the Grand Ethiopian Renaissance Dam. While this coordination has proven challenging to date, the United States, as one of Egypt’s largest donors, can encourage Egyptian leaders to come to the table and reexamine water rights claims based on outdated colonial agreements. Most of Egypt’s financial resources are directed toward health and nutrition programs rather than improving agricultural initiatives and crop yields that would impact nutrition and health over the long term.5

**Background**

While the Nile River Basin might appear to have ample access to water, many regions along the basin experience water scarcity. Making

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matters worse, these drier regions have large concentrations of people, which means minor weather changes and population growth further stress existing water supplies. Although this problem might suggest conflict over water is common in the basin area, that assumption is not true. Globally, 263 rivers cross international borders, and surprisingly, there were 1,831 conflicts in those regions, though 507 contain secondary drivers related to water access. While water is vital for life, the economics of water is often overlooked because, as Adam Smith highlighted in 1776 with the diamond-water paradox, water is cheap, and diamonds are expensive. Climate change adds to the challenges created by erratic rainfall, which can cause floods or droughts with devastating consequences, and has impacted over 300 million people during the past two decades.

According to the UN “International Decade for Action ‘Water for Life’ 2005–2015” website, over 783 million people in sub-Saharan Africa, and 2.2 billion globally, have no access to clean drinking water. The Nile River, the second longest river in the world and the primary water source for the Nile River Basin, covers over 3.2 million cubic kilometers and 12 countries. The Nile consists of two separate rivers, the White Nile, originating in Lake Victoria, East Africa, and the Blue Nile originating in Lake Tana, Ethiopia, that span a vast area where the people are mostly poor and live in several key regions. According to the Human Development Report, all Nile River Basin countries are classified as low on the human development index, except Egypt which is classified as medium. This means most of the population lives in poverty and is susceptible to water and food shortages, with over 300 million people living on less than $1 a day.

Agriculture represents the largest source of income for the rural population. At the same time, most arable land requires rainfall, and only 4 to 5 percent of the region’s agricultural land contains irrigation systems, drastically limiting the ability of the population to mitigate rainfall shortages. An area is considered water-stressed when each person has access to less than 1,500 cubic meters annually, while water scarcity refers to levels less than 1,000 cubic meters. Regions with

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less than 500 cubic meters would be designated areas of absolute water scarcity. The NRB population is highly concentrated and most of the people depend on agriculture for their livelihood. Some areas of the basin experience higher levels of precipitation but storage and transmission infrastructure are lacking to collect and distribute the water. Furthermore, low rainfall levels, some as low as 10 millimeters per year in Egypt, and the lack of irrigation systems force most of the population to depend on rainfall for their water needs. Figure 1 illustrates regions experiencing water scarcity.

![Figure 1. Regions experiencing severe water scarcity](image)

**Figure 1. Regions experiencing severe water scarcity**

Every year, over 100,000 cubic meters of rain falls back to earth. If this water were collected, it could potentially support every person on the planet with 15,000 cubic meters of water per year. The average amount of water required to grow one calorie of food is one liter. Hence, a healthy diet of 2,000 calories a day translates to 2,000 liters of water per person per day. Drought and water stress are of particular concern in the Nile River Basin. While countries along the Nile have access to water, people who live within walking distance of the river can struggle to get enough water to survive. For example, in Ethiopia, water infrastructure is so poor people have less than 50 cubic meters of water per person. Rainfall across the region varies. Egypt, for example, only averages 10 millimeters annually. Thus, drought, water stress, and water scarcity are

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15. Rijsberman, “Every Last Drop.”
acute in the Nile River Basin. World leaders might be quick to disregard the issue, without realizing there are numerous bilateral and multilateral agreements over water, clear evidence the water narrative is cooperative rather than combative.17

**Historic Agreements**

The 1925, 1929, and 1959 historical water agreements remain a governing element in the basin countries and leaders often cite them. Recently, John Mukum Mbaku, a nonresident senior fellow for global economy and development with the Africa Growth Initiative at the Brookings Institution, wrote, “Over the years, Egypt has used its extensive diplomatic connections and the colonial-era 1929 and 1959 agreements to successfully prevent the construction of any major infrastructure projects on the tributaries of the Nile.”18 The factors involved in the original water agreements need to be placed into a contemporary context that demonstrates the agreements are no longer relevant. Properly understood, Egypt’s claim of natural, historical rights must be discarded as an anachronistic legacy.

The British took direct control of Egypt in 1882, and cotton already represented over 80 percent of the region’s exports to the robust English textile market, incentivizing active British control of the waterways.19 The Aswan Low Dam (also the Old Aswan Dam), was completed in 1902 to maximize cotton production and supply the London mills. Lord Allenby subsequently issued his dictate that Sudan would increase the farming region in Gezira, invoking the ire of Egypt and leading to the creation of the Nile Waters Agreement of 1929 stipulating no project would take water from the Nile to “prejudice” the interests or reduce the quantity of water arriving in Egypt. While the agreement did not guarantee a specific amount of water, the river’s entire flow was designated for Egypt during the dry season.

Several agreements were developed between colonial powers and various basin states. For many years, England tried to secure a contract to build a dam at Lake Tana. The Ethiopians, however, never conceded, nor were they part of the Nile Waters Agreement of 1929. When Sudan gained independence in 1956, the country’s leaders, concerned about the impact of the Aswan High Dam, declared the country would not abide by the agreement. Tensions between Egypt and Sudan escalated until 1959 when the strife was resolved with the signing of the Full Utilization of the Nile Waters (FUNW) agreement, specifying Egypt would receive 55.5 billion cubic meters and Sudan 18.5 billion cubic meters (billion cubic

meters based on average water levels of 84 billion cubic meters at Aswan) of water from the dam, though no other countries were included in the agreement.

Egyptian references to the agreement with countries that fall outside the colonial legacy raise the hackles of their neighbors. The historical 1929 and 1959 Nile Waters Agreements arose from British rule to support cotton production in Egypt and farming in Sudan, none of which are relevant today. Tensions over control of the Nile grew heated in 1997, prompting Egypt to cite historical rights based upon the colonial agreements, suggesting all modern states are bound to abide by these documents. Consequently, Sudan refused to follow them, and Ethiopia reminded all parties it never signed the Nile Waters Agreement or the Full Utilization of the Nile Waters agreement; Tanzania, Uganda, and Kenya had already adopted a position that current states were not obligated to follow legacy treaties that do not serve current state interests.20

These frictions generated the 1999 Nile Basin Initiative (NBI) for all riparian states and established a cooperative framework for the use of the Nile, sustainable water practices, and trust and transparency over water use for everyone in the basin. Egypt and Sudan never signed the agreement (South Sudan is not a member, and Eritrea is an observer) designed to promote constructive dialogue, training, and collaborative development of sustainable water practices in the Nile River Basin. Some friction exists with countries located downstream, specifically Egypt and Sudan that want other members to request permission before engaging in activities impacting the basin. The two controversies applicable today are Egypt’s insistence on following a framework based upon colonial agreements and Egypt and Sudan wanting NBI decisions to be based on consensus rather than a majority. This method would ensure Egypt and Sudan are not marginalized since they believe their colonial history grants them special water access status.21

On March 30, 2011, Ethiopia announced construction of the Grand Ethiopian Renaissance Dam on the Blue Nile to provide much-needed electricity for its population, once again raising the specter of water cooperation and questions about access to the Nile. Egypt strongly opposed the construction of the dam, however, the Arab Spring and the fall of Egyptian President Hosni Mubarak in April 2011 facilitated Ethiopia’s seamless inception of the project. Strangely, Essam Sharaf, a former Egyptian prime minister, mentioned the dam as a benefit for the region. Like Egypt, Sudan was too distracted by the secession of South Sudan to engage over Ethiopia’s plans for a dam. Rather, the Sudanese were more concerned about jurisdiction over petroleum and other natural resources.

than water-related agreements, undoubtedly because, heavy rains during negotiations satisfied agricultural requirements. Beginning in July 2011 through the middle of 2012, the entire East African region suffered a drought that was one of the worst in the past century. The drought also caused a food crisis in the Sudan region, forcing the Sudanese to focus on water rather than fossil fuels. Subsequently, South Sudan applied for membership in the Nile Basin Initiative and was admitted in 2012.22

**Grand Ethiopian Renaissance Dam**

The construction of the dam began while the region was struggling through a drought and most political leaders were working to provide food and water for populations on the brink of starvation. Ethiopian leaders focused on building the dam to improve the lives of their people. More importantly, Ethiopia and other riparian states insist on an equitable distribution of water. Many of the NRB states refuse to acknowledge the 1959 agreement which focuses on the use of the Nile for Egypt and Sudan exclusively, though allowing for 10 billion cubic meters for seepage and evaporation, while ignoring the water needs of other countries.23

Neighboring countries demanded a more equitable agreement. Although Egypt used its influence to block funding for Ethiopia’s dam project, Ethiopians were willing to finance the project with additional loans secured from China, much to the dismay of Egyptian leaders. The $4.6 billion dam project was completed on July 22, 2020, and Ethiopia began the lengthy process of filling the dam’s reservoir, which will reach total capacity in 2023.24 The dam’s construction without any disagreements is not an indicator that all the riparian states (Burundi, the Democratic Republic of Congo, Kenya, Rwanda, Tanzania, Uganda, Egypt, Sudan, and South Sudan) are supportive. The apparent peace is due to environmental factors having not significantly strained existing water supplies.

The process of filling the dam is taking place without significant objections from the Nile River Basin community. The dam, however, is likely to incite disagreement. One way to head off potential conflict is to reach an agreement on the discharge of water downstream during water shortages. Currently, no specific agreement on water sharing and the impact of water diversion exists between Egypt and Ethiopia. Furthermore, data are lacking on how the Grand Ethiopian Renaissance Dam will change downstream water flow in both predictable and

23. Mbaku, “The Controversy over the Grand Ethiopian Renaissance Dam.”
unpredictable ways. It will take years to determine the dam’s repercussions from variables such as rainfall, how well Ethiopia adjusts to environmental changes during the filling process, the consequences of filling the dam, and Sudan’s use of the Nile.25 Another important consideration is the amount of water utilized for irrigation in Sudan and Ethiopia. Noticeable impacts on the Nile might automatically be attributed to Ethiopia and the dam and exaggerated or distorted by public opinion and social media, which could transform into widespread protests that could turn violent.

The Nile River Basin, a region with dense communities, poor water infrastructure, and some rain flow averages as low as 10 millimeters annually, has seen riots over food insecurity in the past. Water has the potential to drive conflict and impact food production. A severe drought might tip the scales. Many Nile River Basin countries have limited military capabilities. Egypt, however, has the most significant military assets and the means to engage in conflict if one erupted. When a population lives on the edge between survival and death, seemingly minor changes can spark large-scale protests and violence. For example, the spread of protests around the Middle East during the 2011 Arab Spring was fueled by a spike in food prices, specifically rising bread prices in Tunisia, culminating with demonstrators in Cairo shouting, “Bread and freedom.”26 Egypt remains a major importer of wheat, providing generous subsidies to ensure bread is affordable for the masses of people who live in poverty.

The Nile River is also a source of revenue and sustenance for communities of fisherman who have lived off the river for generations. It is possible the Grand Ethiopian Renaissance Dam will further degrade the dwindling supply of fish and eliminate the livelihoods for entire communities. Ethiopia did not conduct studies to examine the dam’s impact to downstream fishing villages. While violence has not erupted along the Nile over fishing rights, it has in other areas. For example, in 2009, conflict erupted between Kenyan and Ugandan troops over ownership—and the attendant fishing rights—of Migingo Island in Lake Victoria. Fortunately, the incident did not turn violent. Lakes are drying up in the region, however, and altering traditional livelihoods. Thriving fishing communities around Lake Haramaya have disappeared, while other places such as the Lake Chad area in Central Africa have lost 90 percent of their water due to irresponsible practices, climate change, deforestation, and changes in the lake, with many Nigerians migrating to Cameroon. Their settlement prompted a war between the two countries in the 1990s. The International Court of Justice eventually ruled in Cameroon’s favor in 2002. There are multiple factors involved

in the depletion of African freshwater sources, but the trend is clear. Satellite images show many of the continent’s large 677 lakes are shrinking noticeably, which must cause concern and drive more sustainable practices and awareness to utilize freshwater sources better.27

Water and food shortages can easily promote riots, and the violence can quickly spin out of control and turn deadly. The infamous 2007–08 African food riots were driven by food prices doubling, sometimes in a matter of months, spreading from Egypt and Ethiopia to Senegal and even further south into Mozambique. In the future, it is likely irregular periods of dry weather will intensify competition over scarce water resources and cause riots. Evidence suggests the average riot in the in sub-Saharan Africa between 1990 and 2012 led to 66 deaths.28 A few notable examples took place in 2001. Two groups fought over access to the river and 130 people were killed. In Kenya in 2012, over 100 people were killed when violence erupted between Pokomo farmers and Orma nomadic cattle herders over access rights to the Tana River.

Although the Grand Ethiopian Renaissance Dam appears to be ramping up for full use with very little vocal opposition, a drought in the coming years could quickly alter the amiable mood of the Nile River Basin states. Christian Almer et al. have demonstrated water scarcity in agricultural communities will generate social tensions when there is cultural diversity or multiple ethnic groups.29 To foster peace and social stability and avoid conflict and the loss of lives, regional leaders must address these challenges and demand policy changes and updated agreements.

Future Regional Strategic Implications

Regional leaders need to address three key areas to promote better development in the Nile River Basin, the second-most populated continent on the planet. The first area is better agricultural practices. The second area is the effective use of dams to control water during floods, provide electricity, and serve as an insurance policy against drought. The last area is improved stewardship, policies, and water-irrigation infrastructure to manage water as a resource. Along with these changes, the United States can encourage Egypt, Ethiopia, Sudan, South Sudan, and Uganda to reach an agreement regarding water use and the

role of the Grand Ethiopian Renaissance Dam in regulating the waterways of the Nile before a drought impacts the region and tensions escalate.

Some agricultural practices need to be revised to achieve better crop yields. Education programs can assist farmers and demonstrate the benefits of crops that can tolerate frequent dry spells, which are becoming more common crops in the basin. A few more easily implemented solutions include efficient crop rotations to balance soil nutrients and minimize the need for mineral fertilizers, which are not practical for local farmers. Additionally, educational programs can be developed to promote phosphate application, implement manure as fertilizer, and utilize disease-resistant varieties and species of plants that mature more quickly and help local farmers improve yields.

Promoting the use of hybrid seed might be counterproductive. These seeds create a dependency on chemicals and fertilizers that are unaffordable for most farmers. Furthermore, conservation farming can save ground preparation and make better use of rainfall, maximize moisture retention by maintaining open soil surface conditions, promote deep rooting zones, and help navigate intermittent rainfall patterns. Education programs on easier-to-grow crops should be introduced to heighten awareness of alternative food sources. For example, cassava is a naturally pest-resistant and resilient tuber that grows well in arid regions. It takes less water to grow than wheat and is naturally gluten free and an excellent source of carbohydrates with a lower sugar load than wheat.30 The Portuguese introduced cassava to Africa in the sixteenth century, though it is currently cultivated on small farms only and is not widely known in the region.31 Exploring agricultural solutions that can provide better crop yields while educating local farmers about sustainable growing practices is crucial in raising awareness, improving farming methods, and scaling solutions to larger farms to maximize production.

Africa has the potential to become the world leader in hydroelectric power, and aid from the United States could help expedite the process. Dams can provide energy and water security for people in Nile River Basin communities. The region contained over 257 million people in 2016—or more than 20 percent of the total population of Africa.32 Many of these people live without electricity, and the number of people without electricity will likely continue to

grow. By 2030, there will be over 650 million people without electricity on the continent and 90 percent of them will live in sub-Saharan Africa.\textsuperscript{33}

Africa could be the leader in hydropower as a renewable energy source, though it currently only produces 80,000 megawatts.\textsuperscript{34} Power Africa is a US Agency for International Development (USAID) program created to add 30,000 megawatts of clean energy to sub-Saharan Africa. The program funds small uncoordinated projects around the region but none focused on the Nile River Basin.\textsuperscript{35} China, widely considered a leader in global dam construction, has invested heavily in Africa (including backing the Grand Ethiopian Renaissance Dam); meanwhile the United States has many programs in place through USAID. If the United States and China were to cooperate, they could create and execute a comprehensive development plan that would provide much-needed resources and stabilize local governments and economies.\textsuperscript{36}

The construction of effective irrigation systems can provide higher crop yields and increase farming production through technology that prevents water-transmission losses. Most Nile River Basin farmers lack irrigation, though there are a few exceptions. World Bank estimates the cost at between $13,000 and $18,000 (US) per hectare.\textsuperscript{37} Sudan is the exception with 20,000 kilometers of irrigation, but its very old system loses significant amounts of water.\textsuperscript{38} While Sudan has some existing infrastructure to maximize the agricultural yields, it would require significant investment to irrigate its 48,000 kilometers of arable land that depends exclusively on rainfall. Although 20,000 kilometers of arable land are covered with legacy systems, the systems lose significant amounts of water.\textsuperscript{39} Even in areas of the Nile River Basin with sufficient access to water, infrastructure is a problem. One official in South Sudan’s water authority remarked they had enough water to serve the 10 million residents, but they cannot build comprehensive water infrastructure to facilitate distribution.\textsuperscript{40}

The money is available, but US assistance is directed at a broad array of projects in sub-Saharan Africa and must be better coordinated by the State

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\textsuperscript{37} Oestigaard, Water Scarcity and Food Security along the Nile, 81.

\textsuperscript{38} Africa Water Atlas, 80.


\textsuperscript{40} Risi, “Beyond Water Wars.”
Department and USAID. As depicted below in figure 2, agriculture and economic initiatives only received 8 percent of program funding in 2019. While there are many humanitarian issues in Africa, South Africa and Nigeria top the list of aid recipients. Egypt does not appear at all. The only Nile River Basin countries listed are Ethiopia, Uganda, Kenya, and the Democratic Republic of Congo. Rather than scattering US aid dollars around a vast region, localized concentration in regions might produce better, longer-lasting results. Granted, in some countries, armed terrorist groups greatly exacerbate the humanitarian crisis, though eliminating militants has proven more complex in countries such as Nigeria and Mali.

Prioritizing regions such as the Nile River Basin could improve water practices and crop yields, ensure dams provide water during droughts, and increase crop yields, which would better the nutrition and health of the population and reduce the long-term humanitarian requirements and costs referenced in figure 2.

Health programs represent a short-term need, while distributing a more significant percentage of aid to agriculture would strengthen agricultural value chains and enhance crop yields that would pay dividends in the future, thereby reducing the programmatic need for health and nutrition services. In addition to reallocating funding to achieve these goals, the United States must leverage its existing relationships in the region.

In May 2021, the United States and Egypt worked together to reinforce a ceasefire between Israel and Palestinian militants. This action underscores the importance of Egypt’s role in a region that continues to loom large for American policy interests and shows President Abdel Fattah al-Sisi can be an effective partner in ending violence. Egypt continues to be the largest recipient of US assistance, averaging between $7 and $8 billion annually between the Obama and Trump administrations. The United States can leverage Egyptian
aid to encourage Egypt’s leaders to collaborate with regional partners to sign water-sharing agreements that would address the long-term needs of many countries in the region.

Conclusion

The US Congress must divert some of the aid earmarked for Egypt to other countries to develop better water-irrigation methods, increase stewardship over precious water supplies, and assess and improve water use for agricultural purposes, including more sustainable practices and metered programs for high-volume users to guard against waste. Agricultural studies highlight poor farming practices, poor soil structure, loss of organic material, insufficient crop rotation or diversification, and impediments to plant root structure, which drastically reduces the effectiveness of crop yields. A more holistic approach—to include tracking water withdrawn, applied, consumed, and lost—will provide more meaningful numbers and must be considered for a complete picture of water conservation in arid regions.

In addition, better coordination among agencies and other countries in the Nile River Basin can produce stronger policies and promote long-term solutions that will improve the lives of the people and reduce the likelihood of conflict due to growing populations, water shortages, droughts, and other environmental stressors exacerbated by climate change. This action would require the United States to engage China on the continent and synchronize efforts to promote better agricultural practices, build dams, and create irrigation infrastructure to help farmers better steward the available water. The United States would also need to share short- and long-term plans for aid to sub-Saharan Africa. While regional tensions are currently low, environmental instability can lead to drought and place water at the forefront of tensions between states in the region.

Along with policy changes, the United States must take the lead in the development of water-sharing agreements for all riparian states that foster an inclusive Nile Basin Initiative. This action will dictate influencing Egypt and Sudan to abandon old colonial agreements and create dialogue all states in the region would embrace. The time to broaden signatories to the initiative is urgent—before passions become inflamed. All regional communities must sign the 1999 Nile Basin Initiative to include Egypt, Eritrea, Sudan, and South Sudan, and the rest of the world (and donor countries) should use aid to facilitate the process. In the basin, both private and public use of agricultural water resources must focus on more efficient transmission methods, given the results of single-factor studies, to maximize crop yields. The design and potential

application of irrigation systems must consider the sustainability of groundwater and the larger hydrologic cycle overlooked when focusing on single-factor productivity studies used for purchasing and fielding equipment for large-scale agricultural uses.42

Strategists can learn from past water agreements to inform contemporary challenges, and agreements involving all stakeholders can establish a foundation to minimize future conflict. Investment and aid will flow into the continent, and American leadership can provide an overarching plan to improve the lives of the people. Unless changes are made to existing US policies and strategy, violent extremist groups can easily spread as they exploit the failures of the states and destabilize the region. While the US military and United Nations have missions in the Sahel to combat terrorism, not addressing the issues surrounding water scarcity and usage could fuel conflict and violence, creating another region on the continent that requires a large peacekeeping force and more humanitarian aid.

The threat of water wars, while not dire (yet), should draw attention to policy changes and water-sharing agreements in the Nile River Basin to ensure the next environmental crisis does not incite violence in the region. America can lead these efforts to provide long-term solutions to the people’s food insecurity and electrical needs, which will make the population more resilient during droughts and other environmental challenges. Egypt is the keystone in the Nile River Basin. American policy needs to influence al-Sisi to negotiate a water distribution agreement with the Grand Ethiopian Renaissance Dam before the next drought can cause conflict and further destabilize the basin. Furthermore, improving dam infrastructure can provide energy and water security and make a difference between life and death for populations living on the brink of existence.

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Propaganda and disinformation are powerful tools of influence. The former can be defined as “deliberate, systematic attempt to shape perceptions, manipulate cognitions, and direct behavior to achieve a response that furthers the desired intent of the propagandist.”¹ Meanwhile, the latter is a “deception technique based on the dissemination of untrue information with the intention to deceive, manipulate and mislead,” exploiting human emotions as a means of influence.² Throughout the twentieth century, allies and adversaries have employed these tools to achieve their strategic goals. American President Dwight D. Eisenhower repeatedly recognized the chance of an “all out shooting war is far less than the danger we face on a political warfare front.”³ And, today’s digital landscape means false narratives can spread further and faster than ever before.

Indeed, there is evidence countries like Russia have already made a significant impact on rival nations through these tactics. Numerous scholars point to the 2016 US presidential election as a prime example.⁴ In these instances, disinformation relies on exploiting preexisting tensions in a target society (for example, race,
ethnicity, and class) to create division. As a result, these narratives frequently place vulnerable communities at risk and put institutions made up of diverse groups under strain, including the US military, which draws on Americans from all social, cultural, religious, political, and economic backgrounds.

Disinformation poses a threat to these kinds of organizations and by extension, countries. In 2019, the United Kingdom’s cross-party committee on Digital Culture, Media, and Sport described the spread of false information online as an existential threat to democracy.⁵ The gravity of this challenge requires close analysis. This article argues education is the optimal strategy to counter disinformation, identifies lessons learned from nations that have been a target of disinformation, reviews the evolution of disinformation as a tactic of information warfare, looks at the psychological mechanisms through which adversaries manipulate online, assesses the threat disinformation poses to institutions like the military, and reflects on the potential education has to inoculate targeted groups and help everyone survive and thrive in an increasingly digital world.⁶

How Propaganda and Disinformation Work

State and nonstate actors have long used propaganda and disinformation to gain strategic advantage. The arrival of modern mass media in the early twentieth century, however, allowed their efforts to take on global dimensions.⁷ During both world wars, propaganda was an important tool employed to achieve a range of goals. For example, radio allowed key leaders like American President Franklin D. Roosevelt and British Prime Minister Winston Churchill to address domestic audiences directly in their own homes, informing them and influencing their perceptions of the war. Film was similarly employed to boost morale and drive recruitment efforts. Directed by Oscar-winning filmmaker Frank Capra, the Why We Fight documentary series is still considered one of the best examples of such material. The impact of these efforts cannot be underestimated. Some historians even contend the information war unleashed by the Allies was central to victory. Messaging at home was combined alongside actions in the field by organizations like Britain’s

Political Warfare Executive, which engaged in operations to undermine enemy propaganda, which proved increasingly out of sync with the reality of events.8

Throughout the Cold War, influence continued to play a central role, and disinformation formed a pivotal element of Soviet active measures, or “overt and covert techniques for influencing events and behaviour in, and the actions of, foreign societies,” with estimates Warsaw Pact countries ran over 10,000 disinformation operations from 1945 to 1989.9 No matter the form it takes, disinformation is intended to exploit an adversary’s weaknesses.10 As Thomas Rid of Johns Hopkins University explains, “the tried and tested way . . . is to use an adversary’s existing weaknesses against himself, to drive wedges into preexisting cracks. The more polarized a society, the more vulnerable it is.”11

Russia’s use of disinformation campaigns continues to be a key part of its strategy and has taken on a new form in today’s online ecosystem. Russian disinformation can be broken down into four “Ds”—dismiss, distort, dismay, and distract—to disrupt critical thinking.12 Societies have trigger topics, ranging from immigration and abortion to race and religion, which are likely to incite an emotional response and even lead to what is called an amygdala hijack. This is a psychological term referring to when the part of a person’s brain controlling emotion becomes so inflamed the person can no longer critically reason. In other words, people lose connection to the part of the brain governing reasoning and evaluation of facts.13

But emotionally charged narratives are only one way adversarial actors can exploit online audiences who often experience information overload.14 The human brain, lacking capacity and time, cannot sift through all the information available.15 This lack of time and cognitive resources means individuals cannot sort fact from fiction, and they use cognitive shortcuts to process information, making them susceptible to disinformation campaigns. For example, confirmation

15. Duncan et al., Coronavirus and Disinformation, 1–14.
bias involves searching for, interpreting, and recalling information consistent with one’s beliefs and attitudes. Individuals accept information that is congruent with their perspective as opposed to taking the time to process information that is contradictory. For instance, a 2019 study in the journal *Science Advances* found individuals who lean toward conservative politics tend to share social media posts from Republicans.  

Online actors are further able to exploit biases using rapidly emerging technologies, including deepfakes or AI-manipulated audio or video content either AI-rendered, edited or recut, misappropriated, or misattributed. Deepfakes may increase the ability of malign actors to exploit emotions and cognitive biases. Images have been found to be more impactful than text alone. Words are “abstract symbols that need to be reconstructed into a mental image of reality.” In contrast, images appear to offer a direct reference to reality that reduces the suspicion of manipulation.

**Armed Forces and Disinformation**

Like the nation it protects, the US military is increasingly diverse. Women made up 16 percent of the active-duty force in 2017, and ethnic minorities currently comprise 42 percent of military personnel. This diversity can leave the military, like the country at large, vulnerable to disinformation campaigns. These campaigns represent a serious challenge to operational security and the overall cohesion of the armed forces, their allies, and the wider defense community.

For example, adversaries have consistently targeted the forces making up NATO’s Enhanced Forward Presence in Estonia, Latvia, Lithuania, and Poland. In 2020, Russian-sponsored actors released a forged letter online where Polish Brigadier General Ryszard Parafianowicz appeared to criticize openly the American presence in his country during the US-led exercise Defender-Europe 20. During the same exercise, Russian sources also claimed the US military had ignored COVID-19–related travel restrictions, even though US officials had reduced the size and scope of Defender-Europe 20 due to public

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health considerations.\textsuperscript{21} The threat of influence no longer exists only during deployment but also in garrison because of “the collapsed nature of communication . . . and . . . porous boundaries between war and everyday life,” which means geography is no longer enough to act as a defense.\textsuperscript{22}

Hostile actors consistently target members of the US armed forces and veteran communities online. Beginning in 2017, Vietnam Veterans of America, a congressionally chartered nonprofit organization, began a two-year investigative study and discovered, “persistent, pervasive, and coordinated online targeting of American servicemembers, veterans, and their families by foreign entities.”\textsuperscript{23} The report demonstrated servicemembers and their social networks are vulnerable to disinformation. Foreign entities see members of the military community, who often have access to confidential and classified materials, as an attractive target. What is more, active members and veterans are a significant influence demographic in US political life. A team of Vietnam Veterans of America researchers inspected hundreds of Facebook pages and social media accounts and found American servicemembers, veterans, and other social media followers of several veterans organizations were specifically targeted by foreign entities.\textsuperscript{24} They also found individuals from over 30 countries administered the sites they reviewed, and that administrators of these imposter Facebook pages infiltrated other public and private groups.

Imposter pages and accounts built a following by impersonating legitimate military and veterans groups, like the Vietnam Veterans of America, and used camaraderie and community as a way to attract new members. This activity was so prolific Facebook shut down a third of the reviewed accounts for inauthentic behavior or “misleading actions to deceive others about who an individual/group is or what the individual or group is doing.”\textsuperscript{25} Before the shut down, the pages drew over 32 million users. Foreign administrators had used the platforms to “try to drive wedges between groups along varying racial or ethnic identities or prejudices, often pitting law enforcement against minorities.”\textsuperscript{26} This action frequently involved posting divisive content designed to polarize group members, from sharing pictures of NFL quarterback Colin Kaepernick to spreading false information about controversial public figures like

\textsuperscript{23} Kristofer Goldsmith, \textit{An Investigation into Foreign Entities Who Are Targeting Servicemembers and Veterans Online} (Silver Spring, MD: Vietnam Veterans of America, 2021), 6.
\textsuperscript{24} Goldsmith, \textit{Investigation into Foreign Entities}, 12; and Dominique Laferrière, Meghan Fitzpatrick, and Janani Vallikanthan, \textit{An Ounce of Prevention, A Pound of Cure: Building Resilience to Disinformation} (Ottawa, ON: DRDC, 2022).
\textsuperscript{25} Goldsmith, \textit{Investigation into Foreign Entities}, 18.
\textsuperscript{26} Goldsmith, \textit{Investigation into Foreign Entities}, 35.
Congresswoman Alexandria Ocasio-Cortez and posting xenophobic statements like “VETS BEFORE ILLEGALS” to play on sensitive topics like immigration. Disinformation targets fault lines within a society, and military personnel are not immune to these tactics.

Adversary disinformation campaigns undermine servicemembers’ ability to discern fact from fiction. These campaigns penetrate their social networks and make them susceptible to conspiracy theories and extremist groups, which degrades unit cohesion and presents a real force protection threat. Although there are no indications an adversary was directly responsible for the US Capitol attack of 2021, years of influence operations culminated in a distorted cognitive environment—an alternate reality—for many who participated in the riots, and implanted a lasting social and political division that could continue for years. Using the attack as an example, adversaries will continue active disinformation campaigns and employ all information domain tools to exacerbate discord and strengthen their position. Russia has used digital media to fan the flames following the Capitol attack, and China’s media has taken the opportunity to create false equivalencies to justify its behaviors and undermine faith in democratic processes and US legitimacy as a global leader.

These effects offer clear evidence online conspiracy theories and disinformation do not remain online only but can and do culminate in violence. While disinformation is insidious and creates long-lasting effects at the national, strategic, and tactical levels, it can be mitigated through awareness and education.

Education: Inoculation to Disinformation?

There is debate about how to deal with disinformation. Mounting evidence from the humanities and social sciences suggests the best long-term solution is

to educate the public to recognize disinformation. Numerous organizations have stressed the value of education in combating hate. In 2018, the European Commission developed a digital literacy plan for implementation across the European Union. The same year, the London School of Economics Truth, Trust, and Technology Commission called on the British government to incorporate media literacy as part of its national curriculum. Although many countries have just begun to recognize and implement educational programs to counter disinformation campaigns, several countries have proven systems in place.

The Scandinavian and Baltic countries provide a template for how to implement these disinformation education programs. Their experience is unique since “Few [regions] have been subject to more consistent Russian information manipulation over the past four to five years,” including Finland, which has been a consistent target of Kremlin-backed propaganda since becoming independent in 1917. Analysts from RAND Europe argue several factors contribute to Finland’s resilience to foreign influences, including high rates of media literacy. The Finnish government has achieved media literacy through educational campaigns, including a 2014 initiative to teach students, journalists, politicians, and the public how to recognize fake news. Students in primary and secondary education were also tested on their ability to recognize deepfake videos and exercise critical-thinking skills. These programs, and others like them, are “just one layer of a cross-sector approach that Finland is taking to prepare citizens of all ages for the complex digital landscape.”

Working together toward a common goal, the Lithuanian government frequently partners with these groups to increase levels of academic research that survey the public on this issue, and media projects focused on debunking and fact-checking. It has also provided funding and/or support for the development of educational programs.

of an AI-driven platform to monitor media (Debunk.eu) and the creation of media literacy projects for vulnerable groups (elderly, minority populations). 37

Disinformation surrounding the COVID-19 pandemic is a global issue and similarly to the Scandinavian and Baltic countries, other nations have taken effective countermeasures to address associated disinformation. The Taiwanese government collaborated with the Taiwan FactCheck Center. 38 As described by Gill and colleagues, Taiwan used a social-media platform similar to WhatsApp to disseminate accurate information to counter online disinformation. 39 Additionally, the government increased disinformation monitoring to prevent its spread and worked with Facebook to gray out disinformation on Facebook timelines. Lastly, guides were created on how to distinguish between real and fake accounts and suspicious and credible information. Lien and authors noted such collaboration, platforms, and guides were critical in fostering Taiwan's resilience to China's COVID-19 disinformation. 40

### Recommended US Military Media Literacy Training

The Department of Defense (DoD) must mandate a standardized, multifaceted media literacy program to provide servicemembers with the skills required to confront disinformation. The US population from which the armed forces recruit is significantly undertrained and underprepared to compete with disinformation. While a small minority of US schools teach media literacy, most youths and adults lack the skills to analyze critically the information they consume. 41 If this deficiency is not addressed, servicemembers will remain vulnerable to cognitive shortfalls, and ideological divisions will undermine force resiliency. While the Department of Defense has developed initiatives to train servicemembers to combat adversary influence, a combination of public-sector best practices and DoD resources can produce a more comprehensive program,

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Consisting of an annual online training course and an in-person course, to arm DoD personnel and families against disinformation.

In 2018–19, the DoD Joint Staff developed and launched the Joint Knowledge Online (JKO) J3ST-US1396 Influence Awareness computer-based course. The 90-minute course educates participants on adversary and competitor initiatives to influence US and DoD personnel, discusses near-future challenges in the information environment, and briefly introduces tools to counter influence. The course is not mandatory or well advertised, and its static content is becoming stale as the information environment evolves. Although the course’s primary objective is to increase awareness of online influence activities, it is prefabricated and inflexible, and its focus on crucial media literacy skills is underdeveloped. Participants cannot ask questions or practice the dynamic skills needed to develop healthy online information consumption habits on the personal devices used most often: cellphones, tablets, and laptops. In addition, the course does not assess participants or gather performance data to inform course refinement. These shortfalls critically hinder the course’s ability to arm DoD personnel against disinformation. The incorporation of best practices from the public sector could mitigate these gaps.

The Department of Defense would greatly benefit from partnering with public-sector media literacy leaders to develop a dynamic in-person training program. Programs, such as the International Research Exchange Board’s (IREX) Learn to Discern and the Stanford History Education Group’s Civic Online Reasoning, are making great strides in meeting the challenges of the evolving information environment and offer many of the core media literacy skills servicemembers need. These private-sector programs provide the hands-on, real-world applications JKO lacks, such as practical exercises that test the ability to search for, evaluate, and verify information online and to make informed decisions using healthy media literacy habits while accessing personal devices. They also compel students to analyze consumption habits and take ownership of decisions to click, share, read, like, or interact with content online. Students leave the courses with a better understanding of how their actions shape the information environment of their friends, community, and the nation. These programs are designed to be taught by a facilitator through easily accessible, professionally guided in-person or online courses. The main shortcoming of these programs is they do not specifically address adversary and competitor disinformation efforts.
that threaten servicemembers, though they could be tailored to meet these requirements in a partnership with the Department of Defense.\textsuperscript{42}

Private-sector best practices and DoD resources could be combined to develop a comprehensive media literacy training program consisting of an annual online course and a small in-person class that would benefit DoD personnel and family members. The Joint Staff J-7 and its JKO training staff and platform are best positioned to develop and implement a computer-based media literacy training course across the force. Like annual cybersecurity training, all personnel—including civilians—should be required to complete the annual training that should establish a baseline of participants’ media fluency and track changes across demographics. Participant performance data could inform course refinement and, similar to a command climate survey, the course could aggregate concerning trends for the attention of the service chiefs or higher, if necessary. The course should test the ability of servicemembers to demonstrate media literacy skills, such as differentiating between a fact and an opinion, verifying sources, identifying altered visual information, identifying imposter social media accounts, and recognizing targeted divisive material, and also instill a sense of responsibility when sharing or interacting with information online.

In addition to the computer-based training, the service components should also implement focused in-person media literacy training at the company level. Sessions should be held in small classrooms or town halls and led by DoD facilitators, from public affairs or communication strategy and operations, who have been trained by leading public-sector practitioners. The training should address trouble areas flagged by the annual computer-based class and facilitate practical application exercises that test the students’ ability to recognize and counter misinformation using personal devices. The practical application exercises would model leading public-sector courses but would focus on DoD equities. The in-person class would also offer an opportunity for servicemembers to discuss ongoing adversarial cyberattacks, media influence, military actions, challenges faced by partners and allies, and foreign interference in domestic events.

In addition, family predeployment briefs should integrate media literacy training to increase awareness before a servicemembers’ deployment. Although the Department of Defense cannot mandate family members take online media literacy training, many are concerned about the threat of false

information and welcome opportunities to understand and protect themselves from these threats. Family readiness officers and key spouse leaders are also conduits to promote and share online media literacy education opportunities and encourage awareness.

Servicemembers and their families must learn and practice media literacy skills so they can protect themselves and counter adversary initiatives. Awareness programs would help them realize the disinformation threat and encourage them to defend themselves. A DoD-mandated, standardized, and multifaceted media literacy program that combines public-sector best practices and DoD equities can produce a comprehensive computer-based course and an in-person course that provides servicemembers and families the skills they need to confront adversary disinformation threats successfully.

Conclusion

The pace of technological acceleration and the division inherent in recent politics shows no signs of abating. As a result, the world will continue to face a proliferation of disinformation in online spaces, enhanced by sophisticated technology like deepfake videos. These advancements make it difficult to determine attribution or debunk disinformation and create a serious threat to democratic institutions, which are increasingly diverse in composition.

While decisionmakers have considered a variety of solutions, none are likely to have the lasting impact of thorough media literacy education. In 2017, former “Chairman of the Joint Chiefs of Staff, General Joseph Dunford Jr. . . . designat[ed] information as the seventh joint warfare function.”

are being manipulated online. In “Deepfakes and the New Disinformation War,” Robert Chesney and Danielle Citron argue, “democracies will have to accept an uncomfortable truth: in order to survive the threat . . . they are going to have to learn how to live with lies.” If democratic societies are to function effectively, everyone will have to learn to survive and thrive in a complicated digital landscape.

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Dr. Meghan Fitzpatrick, a strategic analyst with Defence Research and Development Canada (DRDC) Centre for Operational Research and Analysis (CORA), is a widely published author on trauma and resilience. Her current work looks at how militaries are navigating the increasing importance of the information environment. Since joining DRDC, she has received recognition for her research, including the CORA Award for Outstanding Achievement in Defence Analysis.

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ABSTRACT: The root cause for the defeat of the Armenian forces in the second Nagorno-Karabakh War was flawed military doctrine inherited from the Soviet Union. This article analyzes the major problems faced by Armenia, uncovers the main reasons for unsuccessful innovation, tests empirical findings against some of the most authoritative theories in the field, and outlines current research on the conflict, while substantiating the analysis with established scholarship in the field of military innovation.

Keywords: Nagorno-Karabakh War, Armenia, Turkey, Thomas Kuhn, military innovation

Unleashed by Azerbaijani aggression on September 27, 2020, the Second Nagorno-Karabakh War concluded with the cease-fire on November 9, which many Armenians were quick to dub capitulation. This war was the latest entry in a conflict that has played out for more than three decades. The conflict emerged in 1988 in the wake of Glasnost in Soviet Union and saw the rise of a strong sense of self-determination by the largely Armenian population of the Nagorno-Karabakh Autonomous Oblast of Azerbaijan. Baku’s attempts at quelling Nagorno-Karabakh’s aspirations for independence by force escalated the conflict to a war in 1992. Eventually, with the Republic of Armenia’s support, the Nagorno-Karabakh forces defeated Azerbaijan, liberated most of the territory, created a security belt by taking control of adjacent Azerbaijani districts, and forced a cease-fire in 1994, thus winning independence for the Nagorno-Karabakh Republic (later renamed the Republic of Artsakh). This agreement, however, failed to mature into full-fledged peace. Ongoing armed confrontation between the Republic of Artsakh and Azerbaijan, ultimately led to the Second Nagorno-Karabakh War.

The reasons for the defeat of the combined forces of the Republic of Artsakh and the Republic of Armenia in the Second Nagorno-Karabakh War are manifold. At first glance, insufficient resources allocated to defense and shortcomings in technology, operations, training, and mobilization led to Armenia’s loss. These shortcomings, however, all originate from a flawed military doctrine inherited from the Soviet Union and based on attritional
warfare. Doctrine is defined here as the ways and methods of conducting operations or, as defined by the US Department of Defense (DoD) as “fundamental principles that guide the employment of . . . military forces in coordinated action to achieve a common objective.”

Armenian forces failed to adapt to the changing character of warfare and find viable solutions in the strategic, operational, and tactical levels of war due to a confluence of impediments to military innovation. Among the most salient of these impediments were unbalanced civil-military relations within the defense establishment and between the military and its political masters, as well as the entrenched values of the general staff of Armed Forces of the Republic of Armenia. While the first stumbling block prevented a robust civilian intervention to spur innovation, the latter obstructed the push for reform exerted by military professionals.

The complacency leading to Armenia’s defeat in the Second Nagorno-Karabakh War provides a critical lesson for modern militaries and their political masters: greater introspection is necessary to mitigate the main impediments to military innovation and reform. The arguments and evidence presented here show no single theory can provide exhaustive answers to diverse cases of military innovation. This overview of the outcome of the Second Nagorno-Karabakh War exposes the effects of lack of innovation, while looking to flawed doctrine as the main cause of defeat. It then addresses scholarship on how institutional change occurs and concludes with applying these theoretical frameworks to the changes, or lack thereof, made in the years between the First and Second Nagorno-Karabakh Wars.

Figure 1. The Nagorno-Karabakh region (Map by Pete McPhail)
Analysis of the Azerbaijani Victory

Officials and analysts have proposed several reasons for the war and Azerbaijan's eventual victory. Some Armenians attribute the debacle to treason amongst Armenian political and military leadership. Others claim Azerbaijan, Turkey, and Russia conspired against Armenia to settle the Nagorno-Karabakh conflict forcefully once and for all. Still others contend Azerbaijan enjoyed wholesale military support from Turkey and enlisted the services of a significant number of Syrian mercenaries affiliated with terrorist organizations, whereas Armenia was left on its own by Russia, its security guarantor. Charges of treachery among the Armenian political and military establishment are merely conspiracy theories. There have been cases of panic and faintheartedness among Armenian decisionmakers and operators, however, though these cases are by-products of the problems that led to the fiasco and not the main cause.

More rational pundits point to the numerical advantages of the Azerbaijani forces against the Armenian opposition as the main cause of Armenian defeat. Looking at force correlation at the onset of hostilities reveals the belligerents could have been assigned equal odds whereby the Armenian side had enough defensive capacity to withstand the onslaught. One analyst, citing Azerbaijan's narrow margin in several major weapons systems, forecasted the conflict would not result in a serious alteration to borders since no side had resources to achieve a complete victory.

An even greater number of analysts ascribe the Azerbaijani victory to their technological edge. Unmanned aerial vehicles (UAVs) played a significant role, inflicting great losses to Armenian personnel and military equipment. The use of UAVs in the Syrian and Libyan conflicts and the Nagorno-Karabakh war shows the utility of trading losses in drones for enemy fatalities in manpower and the advantage of beating the enemy in the race to faster integration of drone warfare technologies and techniques into military doctrine. Azerbaijan's successful use of drones proved a tactical sensation and reaffirmed the potentially devastating effects of airpower on ground forces with unsophisticated air defenses.

The Armenian forces’ air defense system failed to mount viable resistance. More importantly, the Armenian forces’ air defense system failed to put up a viable resistance, a setback attributable not only to the inventory of air defense systems per se but, more importantly, to the force structure they support. While the increasing variety of affordable UAVs can provide belligerents with air power at a fraction of the cost of maintaining a traditional air force, ground forces trained to fight in a “drone-saturated” battlespace are crucial. Well-trained and skilled personnel are still the most important asset on the modern battlefield, and they are key to employing weaponry properly and defending from enemy engagement.

The effective use of any weapon system should be studied within the larger continuum of sociological and doctrinal considerations that make up the two cardinal determinants of military readiness. Sociological considerations examine the extent to which a nation is ready to sacrifice funding and lives in a particular conflict. As the Nagorno-Karabakh wars make apparent, there was a limit to the sacrifices Armenian society was ready to make to continue the struggle for the security of Nagorno-Karabakh and Armenia against serious military threats from Azerbaijan and Turkey. Nor did Armenia’s state policy toward the conflict and corresponding military strategy match the resources allocated to defense throughout the 26 years that elapsed since the end of the First Nagorno-Karabakh War of 1992–94.

A comparison of Armenian and Azerbijani defense expenditures as a percentage of GDP reveals Armenia was not devoting a considerably larger share of its available national resources to defense. During the period 2000–19, Armenia’s military expenditures as a percentage of GDP averaged 3.65 percent, not much higher than Azerbaijan and its average of 3.44 percent. Moreover, there have been periods when Azerbaijan’s military expenditures as a share of GDP exceeded Armenia’s expenditures by 0.3 to 0.9 percentage points (in 2006 and 2011–15). In this regard, a legitimate question to ask is whether Armenia was serious about its defense. With significant dissonance between military reality and investments, Armenia proved unready for the war and “steadily marched toward a military disaster.”

Flawed Doctrine—the Main Reason for Armenia’s Defeat

The remainder of this article examines military innovation in the Armenian defense establishment through the determinant of readiness—doctrinal considerations. In hindsight, the Second Nagorno-Karabakh War clearly demonstrated the Armenian military was clinging to the dogmas of attritional war, whereas its foe was employing the precepts of maneuver warfare. Whereas the Armenian forces fought according to the primer—Soviet doctrine of land operations dated 1989—the Azerbaijani army had adopted the concept of light composite assault units in the early 2010s. These mobile groups could exploit the seams in the Armenian battle line of troops stretched thin along the perimeter of the forward edge of the battle area and attack objectives deep in the Armenian rear. This tactic exploited the other chief shortcoming of the Armenian army—a lack of mobile combined-arms and artillery units. The Armenian army had to rely on an obsolete system of cumbersome fortified areas and massive marching columns and proved unable to assign the necessary number of mobile teams, and thus became powerless against enemy action.

The mismatch between Armenia’s and Azerbaijan’s ways of war and was most apparent in the fight for Shushi, the strategically crucial town whose seizure decided the campaign’s fate. While the Azerbaijani army managed to bring its mobile assault units to the outskirts of Shushi, effectively sealing off the roads to the settlement, the Armenian command assumed its enemy’s infantry could not cope with the Armenian units without the support of tanks, artillery, and UAVs. The problem was the continued reliance on Soviet-legacy military thinking and operational art without attention to the peculiarities of Armenian military culture (that proved victorious in the First Nagorno-Karabakh War) or the changing character of warfare and specificities of the theater of operations. The Soviet military school overly focused on mathematical algorithms and operational art and had a hard time clarifying the boundary between the latter and military strategy, instead emphasizing human and material resources to be expended in attritional warfare.

Literature Review on Military Innovation

During the 26-year peace dividend following the First Nagorno-Karabakh War, Armenia needed a major innovation across its armed forces to create a unique Armenian way of war and attendant theory of victory. This section lays down the theoretical framework, which will determine the factors that either facilitate or hamper military innovation. It draws on scientific research, bureaucratic politics, and civil-military relations, but it begins with the definition of innovation and the scope of change it entails. As Peter Rosen posits, a major innovation implies a change in the concepts of operation, namely, the ideas governing the ways of using forces to win a campaign. A major innovation also involves alteration to the essential workings of the larger organization and priorities assigned to any given arm, while “downgrading or abandoning of older concepts of operation and possibly of a formerly dominant weapon.” Major innovation embraces the marriage of technology and doctrine to produce a revolution in military affairs.

First, to delineate the entities responsible for innovation in the Armenian armed forces and how they enact change, it is necessary to distinguish the different paths military innovation can take in diverse security situations. The balance of power theory clarifies the differences between organizational dynamics accompanying change. According to Barry Posen, the organizational dynamics necessary to effect change are more likely to occur during peace time, whereas during war they are likely to be overturned by both military leaders and statesmen. As the historical record shows, many militaries have been greatly imperiled and even destroyed outright when attacked by their foes amidst an ongoing reorganization.

According to James Russell, however, the successful wartime adaptation of American units in the Anbar and Ninewa provinces of Iraq in 2005–07 goes contrary to prevailing theory, which argues that peacetime presents the most conducive circumstances for military innovation to happen. Indeed, the two most frequent catalysts of innovation are “a significant organizational challenge,” or “an emerging opportunity.” Russell goes on to define two directions of military innovation: top-down, and bottom-up. In peacetime, the impetus for innovation will likely come from the higher echelons of

command and be communicated through explicitly structured guidance. In wartime, new ideas typically arise organically from field units empowered through decentralized authority. An important point for the Armenian case is that peacetime innovation, often more systematic and deliberate, enables time to search for optimal solutions through trial and error. Military conflicts are fought with the army using equipment at hand, and operational possibilities during war are largely determined by decisions made long before the outbreak of hostilities.

If innovation questions the established beliefs, a paradigm change in organizations, explanations, and models of describing and dealing with certain phenomena is required. According to Thomas Kuhn, paradigms in scientific research are universally recognized “achievements that for a time provide model problems and solutions to a community of practitioners.” These past achievements constitute a foundation of so-called normal science, upon which further practice is built. Since normal science cannot be used to uncover empirical and theoretical novelties, it is unable to lead to a paradigm change.

Paradigm changes occur in the course of scientific revolutions—extraordinary events encompassing the shift of professional commitments necessary to deal with anomalies of research outcomes that subvert the existing traditions of normal science. Scientific revolutions unfold through discoveries that establish a novelty of fact or inventions validating novelty of a theory. A discovery is achieved through the following phases of cognition: previous awareness of an anomaly, gradual and simultaneous emergence of both observational and conceptual recognition, a consequent change of paradigm categories and procedures often accompanied by resistance, and adjustment of conceptual categories so the previously anomalous has become the anticipated. An invention, on the other hand, represents a large-scale paradigm destruction following a crisis in normal problem-solving theory and techniques. A direct response to a crisis can be the emergence of a novel theory that will embrace certain solutions which were partially anticipated yet ignored prior to the crisis.

Sometimes, neither gradual understanding of new realities nor a dramatic crisis in old beliefs are enough to produce the paradigm change necessary for launching an innovation. Scholarship on bureaucratic politics posits one

such obstacle to innovation is the tendency to treat institutions like the military as a single monolithic entity rather than as a federation of smaller suborganizations pursuing their parochial interests. As Graham Allison and Morton Galperin argue, an organizational policy, instead of being an output of one rational decisionmaker, is the product of a conglomerate of communities and political actors competing to have a say in the parent organization’s decisions and actions. This bureaucratic politics model views organizations as actors focused not on a single overarching goal but rather on their own conceptions of national security and sectional and personal interests. Russell builds on this conclusion in his theory of military innovation and adaptation, postulating that successful military innovation should overcome bureaucratic resistance to change and alter the bureaucratic behavior of the organization.

The subfields of political science and civil-military relations provide additional insight into how the interests of, and relationships between, civilian and military entities unfold in the process of change and innovation. Posen contends military organizations are reluctant to innovate in peacetime if left to their own devices. Instead, innovation is spurred by the intervention of civilian leaders, who are assisted by “military mavericks”—senior military officers who provide technical knowledge and substantive expertise. Moreover, Posen argues more civilian intervention and less military autonomy will occur within a nation when waging a defensive war.

Deborah Avant’s study of how the strategic relationships between politicians and bureaucracies affect military innovation takes a more moderate view of civilian influence. In her opinion, civilian choices on the organization of a military institution affect the degree of the latter’s integrity—the ability to articulate and present a unified position on any issue of importance as political actors—and its preferences, which are biased toward specific responses. Her comparative analysis of British and American military innovation demonstrates the institutional division between the executive and legislative branches enabled the military to mitigate civilian control by appealing to the legislature when they were dissatisfied with the executive. As a result, while the US Army only reluctantly embraced counterinsurgency as its doctrine of necessity in Vietnam, British counterparts successfully adopted imperial warfare in the Boer War and fought that conflict to a

successful end.\textsuperscript{24} Avant concludes the level of responsiveness of a military to the imperative for change is largely determined by its preferences, degree of integrity, and the type of civilian intervention necessary to promote innovation, which are all determined by the structure of domestic political institutions.\textsuperscript{25}

Rosen holds a diametrically differing position on the distribution of roles in military innovation between civilians and militaries. He suggests innovation in peacetime should be driven from within a military organization where all the civilians can do is support the senior military officers who (akin to Posen’s military mavericks) formulate intellectual and organizational components of a strategy for innovation.\textsuperscript{26} As Rosen contends, military innovation is an ideological struggle aimed at the redefinition of values that will legitimize the activities of a certain group in the military and the political community. This ideological struggle should concentrate on a new theory of victory and an appropriate way of war to achieve that victory. One of the ways to win in the struggle for innovation is to create new promotion pathways for young officers, who advocate a new way of war, allowing them to rise to senior ranks within a period of generational change.\textsuperscript{27}

\textbf{Military Lessons Not Learned by Armenia}

In the Armenian case, military innovation was likely to be motivated by top-level guidance, since the country enjoyed a peaceful quarter century and had enough time to prepare for its next military confrontation. The Second Nagorno-Karabakh War was preceded by two relatively major escalations in the conflict in April 2016 and July 2020. These flare-ups strengthened the belief of Armenian senior military leaders that future operations would be positional in nature and fought with an attritional approach against an opponent who pursued limited offensive objectives. Glaring issues identified in the wake of these hostilities in technological and operational domains were largely ignored.

In the technological realm, among the main deficiencies identified for the Armenian units were the enemy’s incipient attack-drone capabilities and

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the vulnerability of their tanks’ lack of active-reactive armor. Oblivious to these new realities following the hostilities, the Armenian side dismissed the drone threat. According to the first deputy minister of defence: “it [is not] necessary to buy expensive drones when it is possible to hit the target with a conventional grenade launcher.”

In the operational realm, an important lesson to be gleaned from the hostilities in 2016 was the expanded deployment capacity of the Azerbaijani army. That operation tested Azerbaijan’s capacity to use two railways around Nagorno-Karabakh—the first one running from the rear to the front and another larger one running parallel to the front—to raise troops rapidly on alert and redeploy them to the frontline. This mode of transportation proved indispensable for operational mobility manifested during the Second Nagorno-Karabakh War where the Azerbaijani army had at least tenfold the capacity of its opponent for the daily deployment of troops to the frontline.

Recalling the paradigm change, expounded by Kuhn, in doctrinal matters, an innovation might have been attained in Armenia through both discovery and invention. First, most of the phases of cognition described by Kuhn as precursor to discovery existed. The awareness of problems in the Armenian military’s current philosophy of command and control and the larger notion of operational concepts, along with their observational and conceptual recognition, were formed long ago amongst farsighted defense professionals and consequently reflected in the high-level guidance documents issued by the minister of defense. Particularly, the ministerial vision issued to the force in 2018 and mid-2020, respectively, underscored the importance of overhauling forms and methods of warfare and communicated the imperative to eliminate complacency with outdated military thinking, weapons systems, combat manuals, and command and control practices.

Second, if the cognition necessary for the discovery described above was insufficient, a crisis in warfighting practices in the Armenian forces could have spurred the destruction of the doctrine. In the case of the Armenian

31. Kuhn, Structure Scientific Revolutions, vii, 6, 52.
33. Kuhn, Structure Scientific Revolutions, 62–75.
military, an instance of crisis occurred in the command and control domain during the April War of 2016. Driven by the legacy of the Soviet system of directive (restrictive) control, and pending explicit orders, some units fell short of taking the initiative to react to the large-scale enemy assault. Even though there were definite assumptions about the weakness of the established model, however, no novel theory of command and control emerged as a response to the crisis.

Paradigm change failed in the Armenian military because it was not immune to the pathologies of the bureaucratic politics model described by Allison and Halperin.34 It also proved unable to alter its behavior for, as Russell sees it, overcoming the resistance to change.35

Indeed, bureaucratic infighting was in full swing in the Armenian military, whereby the parochial interests of various branches of the armed forces made the strategic planning process of the Armenian Army difficult to implement. The resultant tug-of-war was aggravated by ineffective civil-military relations and the weak leeway the nominal coordinating body—Strategic Planning Division of the General Staff—had in assigning priorities for branch requirements. Consequently, the strategic planning process resembled a clearinghouse for meeting the needs of the branches through the proportional cutting of corners to fit the defense budget, with no assignment of priorities. More important though, all alternatives generated by the general staff for army construction revolved around the same scientific algorithms, to be implemented by different options for force packages, which were all permeated by the same attritional mindset.

In the case of Armenia, the ideological struggle to see innovation through, as depicted by Rosen, was carried out by the Western-educated field-grade officers and Ministry of Defence’s civilian experts.36 They joined hands with the strategic planning division of the general staff to conduct two strategic defense review processes which strongly recommended the armed forces’ doctrine undergo a thorough revision. Regrettably for Armenia, these efforts proved unsuccessful. The two main reasons for the outcome were the organized resistance of the general staff and the inability of the Ministry of Defence to surmount that resistance. The General Staff’s organizational culture was antithetical to the idea of revising Armenian military doctrine. At the same time, the officers with Western professional military education who were aspiring military mavericks alluded to by Posen

were largely barred from promotions to key decision-making positions.\textsuperscript{37} This factor impeded innovation, and it runs contrary to Rosen’s key argument that attributes innovation’s success to the creation of new promotion pathways for young champions of reform within the officer corps.\textsuperscript{38}

An even more important a factor for the success or failure of military innovation in Armenia was the state of civil–military relations in the defense establishment. The importance of civilian control over the military and the civil–military cooperation had been emphasized time and again and enshrined both in the legislation and the chain of command. Thus, taken at face value, civilian control was exercised through the civilian politicians and officials, who spanned the decision–making hierarchy from the commander in chief, through the minister of defence and his deputies, to the head of the Ministry of Defence’s Defence Policy Department. The reality, however, was different and in most operational matters, the elected and appointed civilian masters largely deferred to the expertise of military professionals, thereby playing almost no role in technological and doctrinal innovations. To explain the causes of this phenomenon, one needs to borrow insights from Avant’s institutional theory of military innovation.

According to Avant’s analysis, an organizational dynamic akin to US civil–military relations before and during the Vietnam War also played out in Armenia.\textsuperscript{39} The roots of the skewed relationships stretch back to 1992 and the founding of the national army, which used the Soviet model of army construction and way of war underpinned by relevant scientific algorithms. The degree of integrity within the general staff was high since all general officers and senior colonels were graduates of the same institution (Russian National War College) and/or had shared combat experience in the First Nagorno–Karabakh War. Thus, the general staff was able to put up a unified front in presenting its preferences for Armenian doctrine. These preferences were biased toward attritional warfare, a positional defense, and restrictive control and leaned heavily on air defense and artillery branches—to the detriment of a potent air component and an infantry arm, which was not agile enough to churn out units other than fortress defenders. Given the great attention Armenian heads of state paid to the affairs of the military and the paltry involvement of the parliament in doctrinal and equipment–specific matters, the senior leaders of the general staff were virtually free to bypass the ministry of defense and gain the support of state leadership for its preferences.

\textsuperscript{37} Posen, \textit{Sources of Military Doctrine}, 174–75.  
\textsuperscript{38} Rosen, \textit{Winning Next War}, 20.  
\textsuperscript{39} Avant, \textit{Institutional Sources of Military Doctrine}, 415–17.
Recalling Posen’s argument about the risky nature of wartime military innovation, the reluctance of the Armenian general staff to undergo major change is understandable, given the fact that since 1994 no peace accord had been signed with Azerbaijan and skirmishes along the border were an everyday occurrence. Given the protracted nature of the conflict, however, Armenia’s leaders had to realize complete peace was an unlikely proposition and postponing major reorganization until after it came about was an unwise judgment.

The conservative stance of top military officers on innovation matters could be mitigated by the intervention of civilians, who, according to Posen, can spur change in peacetime. Moreover, in the light of Posen’s other argument, the civilian dictate in military affairs had to be strong in Armenia since the country sought to maintain the status quo and was preparing to conduct explicitly defensive operations in a specific terrain against a specific enemy. Nevertheless, the confluence of elected officials’ deference to senior leaders in military matters and the relatively low level of the innovation-minded organizations and personalities within the military did not enable sufficient pressure to promote major innovation.

**Conclusion**

The main reason for the defeat of the Armenian forces in the Second Nagorno-Karabakh War was their failure to carry out major innovation in military doctrine and to adapt to the changed character of war. The Soviet-legacy operational concepts prevented the Armenian forces from conducting maneuver warfare during the war proper and preordained the decisions made apropos sources of military power well before the hot phase of the conflict. Examining the Armenian case through the lens of various established theories of military innovation leads to several conclusions, some troubling.

On the one hand, the Armenian innovation had all the chances to succeed as it met the fundamental requirements of Kuhn’s paradigmatic change in terms of previous awareness of the new theory and the crisis to substantiate that understanding. Moreover, being, according to Russell, necessarily a top-down process, the innovation was carried out in preparation for a defensive war and, as Posen maintains, had to see more involvement by civilians. On the other hand, possible change was not accompanied by the creation of new promotional pathways as described by Rosen, which would allow “maverick” soldiers to bulldoze their concepts through.

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Nor was Avant’s organizational dynamics and the state of civil-military relations favorable for successful innovation, whereby the highly integrated general staff professed scientific approaches and advanced its biased preferences against the background of anemic civilian authority. As this case study demonstrates, the theoretical underpinnings auspicious for the success of military innovation in Armenia fell short of offsetting the ones that conspired to relegate it to the status of miscarried endeavor.

By way of a more general insight, military innovation has more chances to succeed if it is carried out in an environment where there is a consensus among civilian and military elites about the direction, substance, and timing of changes. Such an environment will create necessary support (manifested both in resource allocations and the promotion of key military personnel) for innovation efforts by the civilian leadership and will enable the military to devise a reform strategy and implementation plan that transcends most intra-organizational parochial interests and have an almost uniform buy-in. Divisions amongst elites will result in incoherent strategies and poor execution of programs of change, causing the atomization of military innovation efforts, which will yield suboptimal results and potentially bring about military calamities.

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Select Bibliography


Developing Strategic Lieutenants in the Canadian Army


ABSTRACT: This Canadian contribution to Parameters’ Strategic Lieutenant series shows how domestic context creates the conditions for professional military education reform to a greater extent than the global strategic context. The article assesses the junior officer education delivered by Canada’s military colleges and analyzes interviews with key stakeholders responsible for the formulation and implementation of reform at the military colleges.

Keywords: education reform, strategic context, leadership, professional military education

The first article in Parameters’ Strategic Lieutenants series posed the question: “What leads governments to reform entry-level officer professional military education: the global strategic environment or the domestic political environment?” The Canadian answer—associated with post–Cold War reforms to the Canadian officer corps—tends toward the latter.1 The Canadian contribution to the United Shield Task Force in Somalia in 1992–93 was marred by the shooting of one Somali civilian and the torture and death of another while in Canadian custody, as well as the mishandling of the incidents by Canadian military authorities. In the wake of the Somalia affair, the Canadian public demanded the armed forces reflect societal values. A wide-ranging government inquiry into the affair recommended a restructuring of military culture to preserve the military’s self-governance and credibility in society.2 These demands in the national and operational environments generated in Ottawa and the court of Canadian public opinion ultimately led to the reformation of the Canadian Forces—renamed the Canadian Armed Forces (CAF) in 2013—officer education program. The CAF had to take charge of reform or be subjected to it. When choosing reform, they included entry-level education for officers as a vital component of long-term change.

Reforms to entry-level officer military education from the end of the Cold War to 2017 were the product of the domestic political environment. Domestic

reactions to incidents that occurred in Somalia in 1993 led to a renewed emphasis on post-secondary education. Reforms were shaped by resource constraints, as part of government efforts to economize and reduce debt in response to globalization, and by shifting government priorities. This article summarizes the delivery of entry-level military education in Canada, assesses perceived changes in the global strategic and domestic environments, and shows how reforms result from the domestic environment.

**Canada’s Military Education System**

Military education in Canada is a joint affair based on three sets of specifications: the needs of the CAF, the service (navy, army, and air force), and the individual (based on specific occupation). Canadian military colleges are designed to educate officers, regardless of service or occupation. For the purposes of this article, the term “lieutenant” is inclusive of all CAF junior officers at the officer-1 level, be they 2nd lieutenants (Canadian Army and Royal Canadian Air Force), lieutenants (Canadian Army and Royal Canadian Air Force), acting sub-lieutenants (Royal Canadian Navy), or sub-lieutenants (Royal Canadian Navy). The CAF handles personnel training common to all services, while the army, navy, and air force provide specific service and occupational training during summers and post-graduation. Military college graduates represent 25 to 30 percent of Canada’s annual officer intake; the remaining officer slots are either directly recruited university graduates or students attending a civilian university in lieu of military college.3

There are two Canadian military colleges: the Royal Military College of Canada (RMC) in Kingston, Ontario, and the Collège militaire royal de Saint-Jean (CMR) in Saint-Jean-sur-Richelieu, Quebec. The CMR Saint-Jean, closed in 1994 due to federal budgetary constraints, reopened in 2008 to deliver the Collège d’enseignement général et professionnel—or “general and professional teaching college”—curriculum under Quebec’s pre-university system. Upon receiving a university degree after one year, CMR Saint-Jean students join their counterparts at the RMC. The CMR Saint-Jean returned to degree-granting status in 2018, which means some, but not all, students remain at the institution for their degree.

The staffs of the Royal Military College and CMR Saint-Jean are composed of military personnel, civilian and military professors, and civil servants. Programs are based on four pillars or components of the Regular Officer Training Program: academic (degree attainment), military (leadership development), athletics

(physical fitness), and bilingualism (proficiency in French). Unlike American service colleges, little service-specific “military training” occurs during the academic year. Service and branch training does not always occur in the summer but may be off cycle or the summer may be dedicated to other activities like French language instruction or on-the-job employment. The program produces “Officers well educated,” meaning fit, bilingual young officers with university degrees and leadership competencies that can be developed further within the context of service and occupation-specific training. A year after graduation, most officers are assigned junior command or staff positions in their service. The most common aspects of their employment involve training and leading people, as well as mastering specific occupational skills. Canadian junior officers perform tasks and functions similar to officers from other countries.

Sources of Change

The push to reform the Canadian Armed Forces through the RMC arose from several interconnected sources within Canada. The end of the Cold War meant there was less justification for funding a large defense complex, and the absence of a clear outside aggressor led the country to look inward and take stock. As a result of this assessment, Canadian defense spending flatlined in the 1990s. A former chief of defence staff dubbed this period “the decade of darkness.”

Several factors contributed to a decline within the ranks, including overseas base closures and force reductions, a federal pay freeze affecting military members and civil servants, and an increasing operational tempo with new deployments paid from a declining budget. There were also public calls for the CAF to adopt a force structure optimized for peace support operations and humanitarian assistance. The Canadian military experience until this time had been characterized by stable commitments and training oriented toward preparation for a war with the Warsaw Pact, which never came. An incident of poor Canadian military performance in the early post–Cold War period led to a loss of confidence among the Canadian public in the armed forces.

In 1993, after an earlier deployment to another UN mission was canceled, Canada deployed the Canadian Airborne Regiment Battle Group (CARBG) to Somalia. The ensuring affair threatened the CAF’s reputation for reliability

4. The phrase originates from Major General Eric Tremblay, a former commandant of the Military College, and appears in college briefings during and after his tenure.


6. Bill Bentley, Professional Ideology and the Profession of Arms in Canada (Toronto: Canadian Institute of Strategic Studies, 2005), 98–100.
in increasingly complex peace missions. Two specific incidents, stemming from attempts to curtail theft of materiel from the CARBG’s compound, contributed to the Somalia affair: the shooting of two Somali civilians, one of whom was killed, and the torture and death of another while in military custody. Both incidents became national scandals because the nature of both incidents disturbed the Canadian public and concerns grew about potential cover-ups of the shooting incidents in Ottawa and Somalia. Outraged by the military’s conduct, the Canadian public demanded reform.

An inquiry into the Somalia affair subjected the operation and the command and control of the Canadian Armed Forces to close scrutiny. While the report was far-ranging in scope, its authors most notably urged

\[\ldots\text{[the]}\text{ senior leaders of the CF to redefine the characteristics and values of the Canadian military and to establish the capability to monitor the CF on an ongoing basis. In that process it will be critical to confirm those core values without which the health of the military profession in Canada cannot be restored. In the process of this re-assessment, the CF leadership should be guided by the imperative that they must be prepared to conduct operations in peace and war in accordance with Canadian standards, values, laws, and ethics.}\]

The inquiry concluded in 1997, and Lieutenant General Maurice Baril, the chief of the defence staff (CDS), asserted, “It is clear . . . that we need to do business in new ways.” He was not alone in his concern for the future. Canadian military historian David J. Bercuson observed the Minister of National Defence M. Douglas Young was concerned as early as 1996 that the commission, as opposed to the government, might set the future agenda for the Canadian Armed Forces. In effect, the armed forces had a choice—reform themselves or be subjected to reforms by others. One year later, Young issued a report on reforming the leadership and management of the Canadian Armed Forces.

The Young report was an action plan for reform, and two parts are especially relevant for understanding education’s role in the reform process. First, the report mandated the Canadian Armed Forces include a formal statement of official values and beliefs in all recruiting, training, and professional development activities. The mandate was justified by the belief the CAF had not evolved with changes in

7. Commission of Inquiry, Dishonoured Legacy, 1:306–11 and 5:1126–44. See also Bernd Horn and Bill Bentley, Forced to Change: Crisis and Reform in the Canadian Armed Forces (Toronto: Dundurn, 2015), 23, 36.
Canada and the international community. Second, and more importantly, the report mandated all officers not commissioned from the ranks must have degrees. The report also called for a review of officer professional development at all levels, including additional strategically oriented training for general and flag officers. Recommendation 12 contained the following direction:

Begin immediately a thorough review of the undergraduate program at the Royal Military College. This review will ensure for each graduate a broad-based education, well grounded in the sciences and humanities, with special emphasis being placed on the development of values, ethics and the leadership skills needed to prepare officers for responsibilities and service to country.

The combination of the officer corps with degrees, the reshaping of officer professional development, and the reviews of the undergraduate program at RMC were an attempt to leverage education as the engine of reform. The Royal Military College—as well CMR Saint-Jean—played (and continue to play) an important role in the education and socialization of Canadian junior officers, who with additional experience and training could become proficient at drawing connections between strategic and operational-tactical levels.

Recommendation 12 provided the impetus for follow-up efforts like the Withers’ Study Group, which focused on how to achieve the requirements and goals outlined in the Young report. In 1997, the group convened to review the undergraduate program at the Royal Military College of Canada and produced a 1998 report with 34 recommendations. First, the group expanded the mandate of recommendation 12 beyond a narrow interpretation of the Young report. In the preface of the Withers report, they stated that examining the academic component to the exclusion of the military, physical fitness, and language components would not meet the intent of developing values, ethics, and leadership skills. The study group explained the strategic context had changed both domestically and internationally, which necessitated changes to education and training. Their logic was straightforward. They first established “the strategic context within which the Canadian Forces would operate in the 21st century.”

12. M. Douglas Young, *Report to the Prime Minister on the Leadership and Management of the Canadian Forces* (Ottawa: Department of National Defence, 1997), 13–16; see also Bercuson, 34; and Horn and Bentley, 36–37, 99–100.
They then examined how this new context placed demands on CAF officers and explicitly mentioned both domestic and international pressures contributing to those demands.\textsuperscript{17} The study group also examined the gap between the actual training cadets received and the ideal and determined options for addressing the gap. The Withers’ Study Group proposed three big new ideas in the report. The first idea was to increase the degree of connection—or “reciprocal commitment”—between the Royal Military College of Canada and the broader Canadian Armed Forces. The second idea was to address issues with recruitment and selection of officers. The third idea was to strengthen the military pillar, under which they noted, “the critical challenge will be to bring about the vital integration of all four pillars to achieve the full synergy available.”\textsuperscript{18} The group emphasized the inclusion of military-relevant content in educational activities to create synergy between the academic and military pillars when possible. Reciprocity would require effort and resources from the Canadian Armed Forces, which needed to believe there would be a return on investment.

The public response to the Somalia affair and the political environment following the end of the Cold War led to a reassessment of the Canadian Armed Forces. The conclusions and recommendations made in the Young and Withers reports emphasized the need to focus on reform at the junior officer-level and consequently the approach taken by Canada’s military colleges.

Reforms Planned

The Young and Withers reports set the stage for a series of reforms establishing how Canadian military colleges would educate officers. A close examination of the Withers report reveals much about the Royal Military College’s role as an engine of reform. Recommendation 3 of the Withers report directly addressed the first big idea recommending a closer relationship between the Royal Military College and the Canadian Armed Forces. The Young report had suggested integrating CAF training and educational institutions under a single umbrella with the mission of stimulating strategic thinking, leadership skills, and ethics. The Canadian Defence Academy (CDA) was created in 2001–02 to serve as a custodian of the profession of arms, provide oversight of joint training and education, and offer steering and direction to three campuses: Collège militaire royal de Saint-Jean, the Royal Military College of Canada, and the Canadian Forces College (a CAF staff college as opposed to a service-level staff college).\textsuperscript{19}

\textsuperscript{17} Withers et al., Report of the RMC Board, 8.
\textsuperscript{18} Withers et al., Report of the RMC Board, 8–9, 18.
The Royal Military College of Canada created a Division of Continuing Studies to oversee the new policy, with an emphasis on distance learning.

Four recommendations from the Withers report (16, 18, 19, and 21) pertained to how the military should select and post personnel into the Royal Military College of Canada for the training and education of cadets. Recommendation 16 stated all officers serving at the college were role models for future generations of officers and emphasized selecting the best possible officers and NCOs for these positions. Recommendation 18 advised the commandant should be a five-year post for the sake of stability, and recommendation 19 suggested the director of cadets should be a navy colonel or captain as opposed to a lieutenant colonel or commander. Finally, recommendation 21 suggested increasing the number of senior noncommissioned members supporting the military pillar.20

The Withers’ Study Group viewed the Royal Military College of Canada and the CMR Saint-Jean as engines of reform for the Canadian officer corps. Evidence of this argument is contained in the fifth recommendation of the Withers Report: “Seek through the MND [minister of national defence] and the Armed Forces Council to increase the percentage of RMC graduates in the CF [Canadian Forces] officer corps from the current 25% to approximately 35–40%.”21 John Scott Cowan, a member of the study group and principal emeritus of the Royal Military College of Canada, confirmed the intent of increasing the intake was to foster change across the officer corps as a whole, and the study group felt the intake had to be greater than 33 percent.22 The military pillar emphasized teaching young officers how to lead others, with the hope military college graduates would transmit their learning experiences to colleagues commissioned from other sources. These graduates would be agents of socialization post-graduation.

The Withers report, despite its emphasis on the military pillar, also contained several recommendations for institutional reform, including the maintenance of high standards to ensure the Royal Military College maintained its academic credibility, a five-year term for the principal, and a review process for degree programs. Yet, recommendations 13 and 14 were the most germane in regards to the inculcation of strategic-mindedness. Recommendation 13 proposed the Royal Military College develop and implement a “core curriculum” of academic material deemed necessary for officers that would complement the degree programs cadets followed in arts, science, or engineering. Recommendation 14 suggested the first-year curriculum focus on core courses to provide additional structure to the academic pillar and demonstrate education could have greater

utility in fostering officership. By delivering the core curriculum through courses, academic departments could cultivate an officer corps with the capacity to examine problems through various methods and synthesize solutions creatively. This approach recognized officership must take a multidisciplinary approach to prepare officers for serving in a dynamic and evolving world.

Finally, the Withers report made several recommendations on how the pillars could be made mutually supportive. For example, recommendation 24 suggested to “[u]tilise the ‘core’ curriculum recommended in the academic pillar to bridge the two pillars. Comment: Appropriate military examples for relevant courses given in the academic pillar should be derived from activities taking place in the military pillar.” In other words, while reforms were necessary, there might not be a significant influx of additional resources available to carry them out, which made synergies between pillars all the more important. Reforms would need to be as resource efficient as possible. The effect of resource availability on the achievement of goals is a major theme of this article.

Reforms Carried Out

To trace the effects of domestic and international strategic contexts on reforms, it is first necessary to scrutinize the implementation of these reforms. The overall timeframe for the reformation of Canada’s military colleges began in 1999, as stated by the unpublished paper of Cowan, an informed participant in the formulation and implementation of the Withers report circa 2005. Cowan was also appointed the principal of Royal Military College in that year and wrote a paper about the implementation of the Withers report in 2005.

The next reform effort in 2017 came from two sources. In March 2017, the CDS directed a special staff assistance visit (SSAV) to examine RMC’s “overall climate, training environment, culture, and Regular Officer Training Plan (ROTP) programme construct.” While some argue the visit was ordered to preempt a report from the parliamentary auditor general due to be published later that year, the findings show a continuity of intent with the Withers report. The office of the auditor general reviewed the Royal Military College to ensure the institution’s value for money and compliance with federal legislation, and

concluded in 2017 that the college was an expensive way to produce officers.26 Focusing on efficiencies and costs, however, obscures the college’s role as an engine of reform for the officer corps and fails to realize the value of institutions that foster officership.27

The recommendations of the various reports provide a checklist to measure progress over time. In 2005, Cowan noted the connections between the Canadian Armed Forces and the Royal Military College had strengthened, the CDS and service leaders frequently visited the college, and college leaders realized the desirability of increased utility to the Department of National Defence and the Canadian Armed Forces.28 Thus, some of the recommended reforms were being implemented at that time.

Nonetheless, the idea of using the RMC as the engine of reform for the Canadian officer corps was never fully realized. Cowan stated this effort was

\[\text{\ldots the one that got away. It was to go from 25\% of officer intake to approximately 35-40\%. While events in Saint Jean help take some of the pressure off, ultimately, what we need to understand is the original reasoning. This was essentially cultural. There are 110 universities in Canada, but we only control the culture in one of them. If you want to evolve the culture of the officer corps through an institution at the input end of the spectrum, you need to broaden the flow through that institution.} \]

While the percentage grew to approximately 28 to 29 percent of the officer intake in 2005, it remained short of the target.30 The SSAV noted the percentage in 2012–13 was approximately 25 to 27 percent of intake, with RMC graduates comprising 55 to 57 percent of the general and flag officers in the Canadian Armed Forces.31 This number should not be interpreted as a sign the core curriculum was producing generals. In 2012–13, the majority of the general and flag officers had over 25 years of service, which meant they were commissioned in the mid- to late-1980s. Royal Military College graduates were retained longer or progressed faster than peers commissioned by other means. Exactly why this phenomena occurred is not easily determined.

29. Cowan, interview.
Synergy on RMC’s grounds emerged from the reforms. Examples include the creation of the Canadian Forces Leadership Institute (CFLI) and the *Canadian Military Journal*. The CFLI, a small institute devoted to the study of military leadership and writing of leadership doctrine for the CAF, was moved from the Royal Military College to CDA in 2003 and eliminated in cost cutting in 2013.32 The cost-cutting efforts resulted from measures to reduce the federal deficit and a strategic review within the Department of National Defence. Cowan remarked the Canadian Forces Leadership Institute “was specific and useful—doctrine and training on leadership. This was the case for a decade.”33 By 2017, RMC’s military pillar found itself subjected to scrutiny under the special staff assistance visit, which concluded the college’s purpose and content were inconsistent.34

Yet, the core curriculum, a significant part of the academic pillar, remained throughout the period. Cowan stated:

> The core curriculum before Withers had become very weak. There were 16 or 17 subjects that were seen as useful to officership. This wasn’t someone’s imagining. We took the Officer General Specification extant at the time and we looked at what the desirable characteristics were and related them to subject areas.35

Elements of the core curriculum later became the basis of the Officer Professional Military Education (OPME) program, which all junior officers were required to pursue regardless of entry scheme and date.36 The program led to more resources for the Royal Military College and favored graduates who completed the requirements as part of their degree. The OPME program proved to be another mechanism to foster change within the officer corps by increasing the amount of education required by officers. In 2013, however, the program was replaced with distance education to reduce completion time and cost and realign it with the Officer General Specifications.37 Junior officers took a smaller set of purely military subjects through distance learning instead of university-level courses. This decision followed the Department of National Defence’s strategic review and the Government of Canada’s Deficit Reduction Action Plan in the early 2010s.

Even without the additional mandate and resources, the core curriculum was intended to link education and military service. For example, academic courses

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33. Cowan, interview.
34. Maddison et al., *Special Staff Assistance Visit*, “Annex I.”
35. Cowan, interview.
were overhauled to include military examples and materials. Some of the same ideas would reappear in later years, suggesting the issues with the curriculum were either unresolved or structural. For instance, the SSAV recommended the Royal Military College improve its effectiveness and efficiency by better unifying and synchronizing the delivery of the pillars.

The SSAV also suggested increasing the staffing of the Training Wing, the military organization responsible for training and mentoring cadets. Many of these recommendations were identical to suggestions provided by the Withers report, especially those pertaining to the desired rank and quality of personnel in the Training Wing. These incidents show that while the Withers reforms were initiated, a number were not fully realized—appearing again in the SSAV recommendations almost two decades later.

The implementation of reforms depends on the level of resources—funding, personnel, and monitoring efforts—sustained over time. Reform efforts, however, often compete with other priorities for personnel and funding. From 2003–11, the Canadian Armed Forces’ operational tempo focused on commitments in Afghanistan, meaning military staffing priorities favored operational units—which is neither surprising nor a criticism. In 2003, Canada committed a battle group for service in Kabul, Afghanistan, with the International Security Assistance Force. By 2006, Canadian commitments grew to include a battle group, provincial reconstruction teams, and security force capacity-building activities in Kandahar province. Although these combat operations commitments ended in 2011, Canada continued to provide a smaller force of trainers in NATO-led activities in Kabul until 2014. These events show operational priorities took precedence over sustaining reform efforts.

Following 2011, the Canadian government sought to reduce its deficit and conducted a strategic review of the Department of National Defence, which led to unintended consequences for the Royal Military College. First, since staffing priorities were higher for operations than for force generation, military staffing levels declined. Second, around 2011–12, the federal government’s review of priorities and effort to reduce the deficit led to a size reduction of the civilian workforce, including RMC faculty. Both efforts emphasized efficient use of resources in accordance with government priorities, however, their effect on reforms suggests the existence of a recurring pattern in professional military education in Canada. In times with competing priorities for limited resources, military leaders preserve combat capability at the expense of other efforts. While

41. Horn and Bentley, 121–25. They present a cultural argument for this preference, however.
context certainly matters to reform efforts, the domestic context seems to trump the international context.

While it may be too soon to tell if the reforms were successful, it is possible to draw lessons from the Canadian experience. Military institutions are subject to the priorities established by political and military leadership. Reform efforts require resources and the likelihood of successful reform declines as resources are constrained. Since professional military education is a proverbial long game, it is vulnerable to cuts by decisionmakers seeking easy wins when the pressure is on to reduce government spending.\(^{42}\)

**Conclusion**

Reviewing the two decades, it is hard to argue Canadian military leaders moved quickly to address a major change in the strategic environment through innovative education. Nonetheless, circumstances presented Canadian soldiers with new challenges and some, but not all, lived up to national expectations. While the Young and the Withers reports were clear and insightful on the role precommissioning education could play in professional renewal for the Canadian Armed Forces, they did not address the development of strategic thinkers for a new and evolving world order. By matching the core curriculum of science, social science, and humanities to a general officer specification, the Royal Military College has created a means of finding synergies between the education and military training of future officers.

Reform efforts also provided important contributions to the profession of arms, including expanding critical thinking through a common OPME distance-education curriculum, developing leadership knowledge through Canadian Forces Leadership Institute, and disseminating military knowledge through the *Canadian Military Journal*. The reforms, however, did not constitute a deliberate effort to develop strategic thinking early in the careers of military college graduates. Nor did these institutional aspects last in the face of resource pressures.

More seriously for military college graduates, the changes in the global strategic context since the Cold War—including globalization, America’s challenges, China’s initiatives, and environmental threats—have not led to a renaissance in professional military education in Canada. The domestic context has eclipsed the global strategic context. The demands of the future are less certain and more fluid than the demands of the past, which has created a need for professional military education throughout an officer’s career. The

\(^{42}\) In general, the military has suffered this fate. See Kim Richard Nossal, *Charlie Fox Trot: Fixing Defence Procurement in Canada* (Toronto: Dundurn Press, 2016).
education provided at the entry level is foundational and should prepare future officers for uncertain and fluid situations. This reality means playing the long game, associated with a changing global strategic context, even when reform efforts, faced with resource scarcity, are forced into the short game of an evolving domestic context.

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SRAD Director’s Corner

The People’s Republic of China’s Challenge to US Security

George Shatzer

Review of

The Long Game: China’s Grand Strategy to Displace American Order
By Rush Doshi

and

The Strategy of Denial: American Defense in an Age of Great Power Conflict
By Elbridge A. Colby

This “SRAD Director’s Corner” is the inaugural contribution by Colonel George Shatzer, director of the Strategy Research and Analysis Division of the Strategic Studies Institute at the US Army War College. In each contribution, Shatzer will discuss books of relevance to US Joint planners and strategists, as well as those of our allies and strategic partners. He will apply his experience and education as a US Army senior strategist to extract insights useful to anyone contemplating how to confront the challenges of today’s strategic environment.

Keywords: China, great-power conflict, People’s Liberation Army, grand strategy, Taiwan

In 2008, I began my first joint tour of duty at then-United States Pacific Command (USPACOM). Returning from a deployment to Iraq during the Surge with the 25th Infantry Division, the assignment was my introduction to planning for the military challenge the People’s Republic of China (PRC) presented to the United States, its allies, and its partners—especially Taiwan. For the next three years, the joint planning team I helped lead focused on studying the emerging capabilities of the People’s Liberation Army (PLA) and what the appropriate responses ought to be should the PRC initiate military operations against the United States, Taiwan, and other countries.

During this time, among US military officers, the potential PLA military threat was not a settled matter. Even some senior leaders serving in the region questioned whether China could mount a credible threat to Taiwan or anyone else. Many of them still viewed the PLA and its ground, air, and naval components as a Cold War-era mass-conscription force, armed with relic Soviet- and Chinese-produced knockoff equipment, that had no recent operational experience. And, the most recent experience of the PLA was, at best, an inconclusive four-week-long 1979 invasion of Vietnam which ended with China
withdrawing all its units after suffering thousands of casualties at the hands of a force composed mainly of Vietnamese militia. Further, as these skeptics pointed out, Taiwan has an 80-mile wide moat between it and mainland China, and Taiwan fields a small but capable, modern military force equipped by the United States. Russia or violent extremist groups, especially radical Islamists such as al-Qaeda, were certain to be the threats worthy of US military attention for the foreseeable future—or so the predominant thinking went. After all, then-Secretary of Defense Robert Gates explicitly stated in 2008 the United States had to focus on winning the ongoing war in Iraq even if it meant diverting resources and energy from preparing for future threats.

These assessments did not take into account (or were even wholly ignorant of) the rapid advance of PLA warfighting capabilities made in the preceding decade-plus since the 1996 Taiwan Strait Crisis. When our team briefed the new PLA capabilities in reconnaissance, command and control, long-range precision fires, air combat, air defense, anti-surface warfare, and many other areas, we could see some senior leaders were beginning to understand the problem—the PRC was building a suite of advanced combat means that could overwhelm the Taiwan military and prevent the US military from effectively intervening in a conflict near Taiwan. At the same time, the term “anti-access and area-denial” (A2/AD) entered the common professional security parlance.

The US consensus view of the PRC threat relative to others has changed much since 2008. Violent extremism remains a pernicious problem but one that now seems manageable through intelligence, law enforcement, special operations forces, and partner forces. Further, US defeats in Iraq and Afghanistan, while ragged and senseless, have not yet created an existential threat to American security. Russia has demonstrated it is a serious threat to European security (as well as in Syria and elsewhere) but has limited options beyond aggression against its immediate neighbors, especially if NATO chooses to act in a concerted way. Iran and North Korea remain destabilizing threats, particularly with their developing nuclear programs, but their effective reach for now is limited, and the United States has options to check major moves either country might make against others.

Thus, with continued rapid growth in all forms of the PRC’s power, the United States finally recognizes, correctly, the PRC is the single greatest threat to US security. As the current US interim national security strategic guidance states, only the PRC is “capable of combining its economic, diplomatic, military, and technological power to mount a sustained challenge to a stable and open international system.” And it is likely to remain so for many, many years. This is why the same interim guidance centers on the need for the United States to “prevail in strategic competition with China” (Biden, *Interim National Security Strategic Guidance*, 2021, p. 20).
Despite this clarity of guidance and focus on the PRC, there understandably remain those who worry an excessive focus on preparation for conflict with the PRC is dangerously misplaced. Beyond the salient point that this focus might beget the war it seeks to prevent, there is the open question of whether the focus is necessary. It seems apparent the PLA has reached parity with many US combat capabilities and strives to reach parity, and even superiority, in many others. But, if the PRC does not intend to compete directly with the United States, and has no serious designs on displacing US influence globally or even regionally, then the current US preoccupation with the PRC is possibly a serious mistake.

The question of whether China has a grand strategy to replace the United States as the global hegemon is the central question of Rush Doshi’s *The Long Game: China’s Grand Strategy to Displace American Order*, and the title makes his conclusion clear. Doshi, the founding director of the Brookings China Strategy Initiative and current director for China on the US National Security Council (he completed the book prior to joining the council), makes a compelling argument the PRC has patiently planned for decades to overtake the United States as the world’s dominant power. As a China scholar and a proficient Mandarin speaker, Doshi draws heavily from a variety of publicly available but hard-to-obtain PRC documents to build a convincing case for the existence of a deliberate PRC grand strategy to counter the United States. He defines a grand strategy as “a state’s theory of how it can achieve its strategic objectives that is intentional, coordinated, and implemented across multiple means of statecraft—military, economic, and political” (6).

Doshi charts the evolution of the PRC’s grand strategy to displace American order beginning with its emotional roots in China’s “Century of Humiliation” but forged critically by a “traumatic trifecta” of major events: the US reaction to the Tiananmen Square Massacre in 1989, the US Gulf War against Iraq in 1990–91, and the collapse of the Soviet Union in 1991 (11). He briefly mentions the Taiwan Strait Crisis in 1996 and the errant US strike on the Chinese embassy in Belgrade in 1999 (though he says nothing about the EP-3 incident near Hainan Island in 2001) but his main focus is at the grand-strategic level with most discussion centered on political and economic issues. He addresses the military aspects of the PRC’s strategy (mostly maritime issues) in two dedicated chapters that take a supporting role to the full body of the narrative.

Doshi frames this strategy as one intended to displace the United States as a regional and global hegemon by first blunting the United States’ exercise of control over affairs regionally, then building the PRC’s control over others regionally, and finally expanding these efforts globally. In itially, China followed a “hide and bide” approach to quietly blunt US control so as not to elicit negative reactions or countermeasures from the United States and others. Then, with new direction from then-President Hu Jintao, and with the 2008 global
financial crisis apparently weakening US power, the PRC shifted its approach to “actively accomplishing something” as it began to build its control in the region. Now, Doshi argues, following the election of President Trump in 2016 and the COVID-19 pandemic in 2020, Xi Jinping, the current Chinese president, considers time and momentum on China’s side and has firmly shifted the PRC to expanding its blunting and building efforts globally. Doshi dedicates an entire chapter to examining in impressive detail the political, economic, and military aspects of all three phases.

The book has its limitations though. Doshi does not address PRC espionage or influence operations inside the United States nor does he meaningfully consider options the United States could take to deter China from continuing to pursue its strategy. Nonetheless, he provides the real gem of the book in the final chapter—the strategy the United States should follow to answer the PRC’s challenge. His set of recommendations are thoughtful and compelling and fundamentally recognize the growth of PRC power must be dealt with directly in a concerted, grand strategic way.

In *The Strategy of Denial: American Defense in an Age of Great Power Conflict*, Elbridge Colby argues a similar premise but arrives at slightly different and more detailed prescriptions. Like Doshi, Colby has deep experience with national strategy formulation as a former deputy assistant secretary of defense for strategy and force development who led the development of the 2018 National Defense Strategy. Where Doshi focuses on grand strategy, Colby centers squarely on defense and military strategy. He unabashedly argues “because force is the foundational form of power and the ultimate arbiter of disputes in the anarchic international arena, the regional balance of power is at its core a question of military power” (17). He further suggests the United States must accept China will not suddenly disappear as a threat and will continue to seek to grow its power. As such, Colby calls for the United States to play a balancing role in the Indo-Pacific and create an “anti-hegemonic coalition” to prevent the PRC from becoming the dominant power in the region. More specifically, the United States should pursue a denial strategy only, not more aggressive strategies to replace the communist party in China or more accommodating strategies that focus on influencing the PRC to act more in line with US interests. Colby describes how this US-led anti-hegemonic coalition should array a geographical defensive perimeter, add certain nation states as members, and potentially consider providing nuclear-strike capabilities to select members.

The aim of this approach would be to deny the PRC its best (not most likely or most dangerous) course of action—a limited war to seize control of Taiwan forcibly to remove it from, and break, the coalition. This distinction as the best strategy is important since it addresses the view that conflict over
Taiwan is not likely. Colby argues a focus on likely options—such as gray-zone competition with the PRC—risks expending resources on inconsequential matters, and most destructive options—such as nuclear war with the PRC—are highly unlikely and have effective counters in place already. He makes a persuasive case that seizing Taiwan is the best option for the PRC because of the many important benefits it affords them toward gaining regional hegemony. Hence, the United States and the coalition must focus on denying China such a potential large gain in power.

Colby also notes US and coalition preparations for a limited war over Taiwan would certainly build readiness to deal with other contingencies. If his argumentation suffers, it is in his dismissal of the importance of the gray zone as a “euphemism for actions that do not cross the threshold of major significance” (105). This could be true when considering any one or just a small set of actions. But, the PRC seeks to accrete the benefits of many such actions over time for decisive effect while avoiding the risk of war directly with the United States and its allies.

Additionally, Colby forgoes operational assessments of relative military strengths and weaknesses between the PRC, the United States, and others. He outlines a conceptual framework for building a defense strategy that should be resilient beyond any discrete or purely military considerations. Yet, he also aims for the framework to be detailed enough to provide a clear focus for concerted action. He generally succeeds but never convinces readers his strategy is resilient enough to deal with the extreme asymmetries in military capabilities the PRC seeks to build.

Despite their minor shortcomings both books are strong works of strategy. They succeed because they accurately assess the security problem the United States faces, and they offer novel and realistic solutions.

Doshi and Colby are clear-eyed and frank about the potentially severe threat the Communist Party of China-led PRC poses to the US-led liberal order that underpins US security and freedom. The very nature of PRC strategic aims and of its authoritarian political and economic systems are at fundamental odds with that of the United States’ own. If the PRC were to realign most of the global order under its standards, there is no doubt the US position in the world would decline and US security would suffer. Also, both books rightly recognize the PRC challenge is likely to intensify as the country’s economy continues to grow larger than the economy of the United States, its already much larger population becomes increasingly wealthy, and the Communist Party of China grows increasingly nationalistic and confident. Both authors propose complementary strategies that are excellent for many reasons.
First, Doshi and Colby recognize the United States must achieve focus. It should concentrate on, and orchestrate, a strategy to deal with the central security problem posed by the PRC while managing other security issues that warrant secondary attention. Without a consistent and coordinated long game of its own, centered on a strategy of denial, the United States risks being distracted by the here and now of regional problems at the expense of the global threat.

Second, both authors propose the United States adopt asymmetric strategies that do not seek merely to match Chinese moves but instead endeavors to leverage US advantages. This approach is necessary because, as noted, the PRC enjoys real advantages over the United States which past serious threats such as Nazi Germany, Imperial Japan, and the Soviet Union never came close to enjoying. And given the trajectories of growth of these advantages, were the United States to try to outspend the PRC on, say, military platforms and technology, it would be making a mistake similar to the one the Soviet Union did during the Cold War. Instead, the authors correctly advise the United States to build upon its current advantages in a robust network of allies and partners to thwart the growth of PRC power. As Doshi frames it, the United States would employ its blunting and building strategy through political, economic, and military means coordinated with allies and partners. For Colby, the anti-hegemonic military coalition is the bulwark. Both approaches are necessary because of the added resources these partners will bring and because regional partners especially are needed to answer the “first-mover advantage” the PRC enjoys with its geographical position and short lines of communication.

Finally, Doshi and Colby propose strategies which advance US thinking about its response to China’s challenge. Both note the current US debate over how to deal with the PRC is mired between the two poles of accommodating or changing—trying to get along with Beijing and generally accepting its growing power, or influencing the Chinese to change their behavior fundamentally to suit US interests. The authors recognize both strategies are dead ends. Instead, they propose strategies that account for PRC power, and reduce it, while rebuilding US power. Thus, Doshi and Colby resolve a false and unproductive dichotomy in US thinking and provide a much-needed evolution in US strategy development.

Properly recognizing and dealing with the potential threat China and the PLA pose is the most pressing security problem the United States faces now and in the near future. Both *The Long Game* and *The Strategy of Denial* are important, if not vital, contributions to the study of this problem and demand the attention of military professionals.
George Shatzer

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To Consider – Recent Books on Similar Topics

*China Unbound: A New World Disorder*
by Joanna Chiu

*The Chinese Invasion Threat: Taiwan’s Defense and American Strategy in Asia*
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*The World According to China*
by Elizabeth C. Economy

*Stronger: Adapting America’s China Strategy in an Age of Competitive Interdependence*
by Ryan Hass

*Where Great Powers Meet: America & China in Southeast Asia*
by David Shambaugh
Andrew Monaghan’s book, *Dealing with the Russians*, begins with an unambiguous warning: “so let us be clear from the start: Russia poses a major challenge to the Euro-Atlantic community. This challenge is serious and there should be little doubt about it” (10). Moscow’s aggression against Ukraine, ongoing since spring 2014, demonstrates Vladimir Putin’s willingness to violate the most fundamental tenets of international law. The string of hostile actions that followed set Russia on a collision course with the United States and its allies. Russian military operations in Syria breached international humanitarian laws and risked the escalation of tensions. Active measures, most prominently interference in the 2016 US presidential elections, targeted democratic processes in western states. In response to these aggressions, the Euro-Atlantic community adopted a series of measures for dealing with the Russian threat, such as reinforcing NATO’s posture (especially in Eastern Europe), imposing economic sanctions, and securing itself against various hybrid threats.

In his cogently written and argued book, Monaghan diagnoses why the Euro-Atlantic community’s efforts to date have failed to constrain Moscow’s aggressive behavior. He argues although the community clearly agrees about the severity of the challenges faced, the exact nature of the threat remains inadequately understood. The United States and its allies lack a coherent strategy, which is essential for dealing with Russia in the long term. To devise a successful strategy, the United States and its allies will need a detailed understanding of Moscow’s foreign policy.

In the chapter “(Mis)Interpreting the Russian Threat,” Monaghan discusses how the uncritical use of historical analogies like the “New Cold War,” the fixation on questionable abstractions like hybrid warfare or A2/AD, and especially essentialist assumptions about Russian expansionism have become a “trap for thinking” in the West (40). The resultant view of Russia lacks nuance and does not accurately reflect the country’s foreign policy motivations, which are far more
complex than the current focus on potential challenges to Euro-Atlantic security suggests. The chapter “From Dialogue to Deterrence” demonstrates how a crude understanding of contemporary Russia has hindered the identification of policies suitable for handling the complex problem. Responses like economic sanctions or NATO reinforcements in Eastern Europe are reactions to individual events rather than elements of a coherent strategy.

Monaghan argues the perceived dichotomy in Western discourse of either deterrence of, or dialogue with Russia, is particularly unhelpful. Can deterrence work if it is based, at best, on a partial understanding of the Kremlin’s motivations and capabilities? Can dialogue work without a nuanced understanding of the nature of current tensions, including an appreciation of how the Kremlin’s views of the United States and its allies have influenced its actions over the past few decades? Neither deterrence nor dialogue are a panacea or an end in itself. As Monaghan states, “success in both will be the consequence of a coherent broader strategy” (85).

Dealing with the Russians provides food for thought for readers seeking a better understanding of the current crisis in relations between the West and Russia and possible ways forward to prevent tensions from spiraling. Above all, the book is explicitly relevant for Western policymakers and decisionmakers developing future policies vis-à-vis Moscow. Monaghan’s work, based on extensive personal experience collaborating with policymakers and military practitioners, is a plea to take the Russian challenge seriously. Doing so, however, means more than hawkish political statements or the adoption of measures in reaction to individual events.

In the concluding chapter, Monaghan outlines systematic efforts required, in his view, to create a coherent future strategy. There is no quick-fix solution. Instead, a serious investment in reinvigorating the Russian studies community is required to regain the linguistic skills and country expertise lost since the end of the Cold War. This focus should not be too narrow. A holistic understanding of contemporary Russian foreign policy needs to draw on interdisciplinary insights from history, politics, sociology, and economics. Institutional partnerships able to coordinate knowledge exchanges between researchers—academics, think tanks, and independents—and relevant state structures also need to be strengthened. Most importantly, concerted effort is required to confront and challenge groupthink in policy- and decision-making circles, such as the ongoing fixation on hybrid warfare, which has been comprehensively debunked by Russian military experts.

The United States and its allies have failed to devise a coherent Russia strategy not only because of persisting “narrow, abstract and clichéd” views of Russia, but also because these views have been “impervious to ‘reasonable
challenge” (92). Policymakers and decisionmakers in the West willing to have their views challenged in the name of devising a future grand strategy for Russia should read Monaghan’s book.
How should the United States adapt to today’s challenging strategic context? It faces a rising China, a reckless Vladimir Putin in Moscow, diminished credibility among allies large and small, and a host of underfunded domestic needs—especially infrastructure and technology—that will impact future prosperity and security for generations. In this dangerous world, how can the Biden–Harris administration coherently balance its aspirational policy aims while constrained by a federal budget that bleeds red ink?

In *The Art of War in an Age of Peace: U.S. Grand Strategy and Resolute Restraint*, Michael O’Hanlon, director of research at the Brookings Institution, offers a trenchant analysis of the challenges and a strategic outline that avoids the pitfalls of retrenchment and the dangers of imperial overstretch. His grand strategy, “resolute restraint,” carefully positions the United States for the long run, without wild alterations that may undermine global stability or endanger vital US interests (xii).

O’Hanlon carefully distinguishes resolute restraint from “offshore balancing” and the “restraint” strategy promoted by Barry Posen, which focuses on US overspending and a reposturing of the US military (37). O’Hanlon’s resolute restraint seeks more discipline in American interventions but argues, appropriately, for continuing US alliance commitments. He sees our friends and partners as a unique strategic advantage that should be sustained, not undercut—a perspective echoed in Mira Rapp-Hooper’s superlative *Shields of the Republic* (2020). O’Hanlon’s version is resolute about the defense of those allies, the rules-based order, and freedom of maneuver in the global commons. He is restrained about the use of force in every minor crisis, resistant to growing additional allies or partners, and opposed to the heavy promotion of values, human rights, and democracy.
Our current and future allies and partners will not find O'Hanlon's ideas on restraint reassuring and, perhaps influenced by the growing narrative about the erosion of US power and credibility, may hedge against it. The recent fiasco in Afghanistan will be seen as an example of excessive restraint and, on Washington's part, a shortfall in resolute leadership. While deep engagement may be unaffordable, persistent leadership and true partnership with current and future allies will be necessary if order is to be sustained.

The chapter on China is extensive, well-balanced, and noteworthy in its analysis and prescriptions. O'Hanlon acknowledges the Communist Party's foreign activities over the past decade “suggest hegemonic temptations of a much more sweeping character” and a level of ambition that is “a dagger right at the heart of the rules-based global order” (85). He calls for a smart strategy that recognizes the inevitability of China's growing influence and seeks to redirect Beijing's progress in nonthreatening directions. O'Hanlon details the relative structural advantages the United States enjoys in terms of economic potential and offers several well-founded recommendations to enhance American competitiveness.

O'Hanlon's unique threat framework is a distinctive element of the book. While the first section follows the Pentagon's most recent threat construct, which covers China, Iran, North Korea, Russia, and transnational terrorism (sometimes referred to as “4+1”), O'Hanlon generates a more functional framework he calls “the other 4+1” (173). This construct lists the threats from nuclear, biological, digital, climatic, and domestic support and focuses on the need to buttress domestic support for a renewed grand strategy, as well as manage our burgeoning debt. We tend to overlook these challenges, which is a mistake. As O'Hanlon notes:

None of the above are scheming enemies in the traditional sense. But they pose serious challenges nonetheless. When they interact with the classic list of threats, they can make every problem more serious. They can exacerbate, intensify, or accelerate the dangers post by more classic, human adversaries; they raise the stakes enormously (161).

This chapter presents a compelling argument for ensuring these issues are captured within the national security strategy. O'Hanlon offers examples of actions America can take to remedy our limited preparedness and mitigate these threats. The one shortfall about the alternative “other 4+1” is it overlooks domestic terrorism (173). While controversial, the inclusion of the left and far-right elements of domestic terrorism more accurately reflects contemporary security challenges in the aftermath of the 2020 election and the pandemic.

After the book’s tour d’horizon of threat actors and functional challenges, readers will find it difficult to call today an age of peace. Moreover, while O'Hanlon does offer prescriptions useful as grand strategy, they hardly constitute
an “art of war.” While this is a quibble, “The Double Threat Matrix” would have been a more appropriate title, given the double set of threats presented. O’Hanlon also properly derides Steven Pinker’s thesis about the end of war, calling the idea of an inexorable path toward global peace “Pollyannaish” (161).

All in all, O’Hanlon’s The Art of War is a sound overview of today’s accelerating and converging challenges, offering a reasonable strategic approach that conserves and focuses America’s power on its core interests. This realistic book merits serious consideration for professional military education reading lists and is strongly recommended for classroom use in strategic studies programs due to its balanced and prudent approach.
David P. Colley’s 2021 book, *The Folly of Generals: How Eisenhower’s Broad Front Strategy Lengthened World War II*, examines Supreme Headquarters Allied Expeditionary Force (SHAEF) military actions and missed opportunities during the war. An award-winning author, journalist, and former US Army ordnance branch officer, Colley believes the SHAEF could have achieved victory seven or eight months ahead of May 1945. He contends the “‘broad front’ strategy” planned and executed in Europe denied the Allies the ability to concentrate forces in a decisive point and exploit success over the course of World War II (xi).

Much of the historical review on World War II describes the Allied forces as heroic figures who defeated the forces of evil in Germany. With the discovery of the concentration camps and systemic genocide of millions of people in Germany and Poland, it is hard to argue World War II was a war the Allies had to win. *The Folly of Generals* does not erase that image, but does shine a light on the tactical opportunities that could have been exploited if senior Allied commanders were more aggressive and willing to take additional risk.

Colley cites interviews with several German generals after the war who admitted to weaknesses in the German Siegfried Line of defenses the Allies could have exploited. He specifically examines operations at Arnhem in the Netherlands, Falaise in France, and Valmontone in Italy, as well as Operation Husky and campaigns to cross the Rhine and liberate Paris. According to Colley, these operations are examples of tactical opportunities that—had the Allies been willing to abandon their rigid commitment to a broad front strategy moving from west to east into Germany—could have led them to greater success against the Germans. Much of his criticism is placed upon both the SHAEF and General Dwight D. Eisenhower the SHAEF commander. Colley refers to the refusal to change strategies “as the US Army’s (or Eisenhower’s) tactical ignorance” which prevented them from...
reinforcing success or “concentrate[ing] forces on a single objective” (x). He also notes political considerations, rather than tactical strategy, played a part in the decision making at SHAEF which rippled down through the organization.

Much has been written about the impact Winston Churchill, Franklin D. Roosevelt, and Joseph Stalin had on the strategic conduct of the war. The Folly of Generals instead focuses on tactical opportunities. For example, Army group commander Jacob Devers and his forces reached Strasbourg, France, in November 1944 and had the opportunity to cross the Rhine. He intended to drive north on the east side of the river to relieve pressure from other Allied forces in the north. Eisenhower, however, wanted a breakthrough to occur in the north after he consolidated all forces on the west side of the Rhine and refused to let Devers cross the river. Colley argues Eisenhower was too cautious. He cites an intelligence debrief report from the German chief of staff to SS General Vatterodt, the commander in Strasbourg, which confirmed a penetration across the Rhine at Strasbourg would have seriously upset the German forces lightly guarding this sector. Colley contends if Eisenhower had authorized Devers to cross the Rhine in November 1944, then the Battle of the Bulge would not have occurred in December.

While Colley’s claim that Eisenhower was too cautious may have some merit, the SHAEF commander had many challenges to balance beyond tactical advances and opportunities. Coalition maintenance, wartime production limits, mobilization and training timelines, sustainment challenges, displaced personnel, humanitarian support, and political considerations may override the tactical opportunities division and Army commanders encounter. Eisenhower had to win the war with the army he had. The broad front strategy might have been designed to win by attrition rather than by annihilation. Opportunities for tactical victories and exploitation did exist, but they appear to have conflicted with the Allied strategy based on attrition on two fronts. Tactics must be nested into higher level strategy or they are considered a waste of resources.

The Folly of Generals raises, but does not answer, many of the timeless challenges for a commander in large-scale combat operations at echelons well above the brigade combat team level. When is a strategy of annihilation better than one of attrition? Can a theater strategy change between the two? Command decisions require a commander to make decisions with imperfect information. Personalities and relationships between commanders may be more important than command relationships at the senior levels, and sustainment still determines the feasibility of strategic options. If we are contested in all domains in the projected future, an expeditionary army can expect sustainment challenges with long lines of communications.
Colley’s book provides historical examples, and he supports his argument at the tactical level. It is difficult, however, to prove a conclusion to the war would have been achieved sooner at the strategic level based on a tactical victory. The actions of a committed adversary fighting an existential threat should not be underestimated. Bold tactical actions could have ended the war; they also could have deteriorated Allied cooperation and, in one extreme, made postwar conditions in Europe worse at the start of the Cold War. Historians can talk past each other when considering the strategic, operational, or tactical level operations and decisions, and both can be correct. In any war, mistakes that could have saved lives become clear only in hindsight. As war is a human endeavor, perhaps we should not judge too harshly the sacrifices of the few who bore the burden of supreme command and succeeded in winning the war.

I recommend *The Folly of Generals* for readers interested in the European campaign who will enjoy the division-level tactical opportunities explored in the book. It clearly highlights the major challenges of coalition warfare in large-scale combat operations and demonstrates the differences of perspectives between tactical, operational, and strategic levels of war and associated priorities and risk at each level.
On “Broken Nest:
Deterring China from Invading Taiwan”

Eric Chan
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This commentary responds to Jared M. McKinney and Peter Harris’s article “Broken Nest: Deterring China from Invading Taiwan” published in the Winter 2021–22 issue of Parameters (vol. 51, no. 4).

Keywords: Taiwan, Chinese Communist Party, diplomacy, deterrence, cabbage strategy

In the last issue of Parameters, authors Jared M. McKinney and Peter Harris proposed a novel method of deterring the People’s Republic of China (PRC) from invading Taiwan without the latent threat of a great-power war. From their point of view, the best solution would be if Taiwan, with US assistance, could keep the peace in the event of an invasion by threatening to target both Taiwan and PRC semiconductor facilities. By threatening high, lasting economic costs, complemented by conciliatory outreach to “ease China’s cost of restraint,” the Chinese Communist Party (CCP) would have no rational reason to invade.

Unfortunately, the “broken nest,” scorched-earth solution badly misjudges the primary reasons behind the CCP’s desire for unification and domestic Taiwanese politics. Such a solution would not only fail to deter China, it would be an enormous boon to the CCP’s “United Front” propaganda. In this brief response, I address the three main problems presented by the broken nest strategy and why it should not be implemented in its current form.¹

The first issue I identify is the belief US/Taiwan attempts to restore a semblance of deterrence by denial would result in an arms race. Rather, the Chinese Communist Party has engaged in a single-handed arms race for over a generation despite remarkably favorable geopolitical conditions.² Over the last few years, the United States has begun shifting its defense posture and increasing security cooperation with Taipei, and Taiwan has significantly boosted defense

1. Jared M. McKinney and Peter Harris, “Broken Nest: Deterring China from Invading Taiwan,” Parameters 51, no. 4 (Winter 2021–22), 33, italics in original.
spending as part of a defense reform program. It is important to note the People’s Liberation Army (PLA) aggressiveness toward Taiwan (and for that matter, across the region) significantly predates the American and Taiwanese defense shifts.

Since the mid-1990s, the PLA has enjoyed double-digit annual budget increases, while the United States was preoccupied with the war on terror and Taiwan’s military atrophied during the pro-PRC engagement administration of Taiwan President Ma Ying-jeou (2008–16). As seen in the PRC’s identified “window of strategic opportunity” (roughly 2002–2020), the PLA received some of its highest budget increases while testing out gray-zone warfare concepts now being used against Taiwan. For instance, PLA Air Force incursions into air defense identification zones in the mid-2010s, as a method of operational attrition/political intimidation, were heavily tested against the Japan Air Self-Defense Force. China integrated Chinese Coast Guard, PLA Navy, and maritime militia units in a “cabbage strategy” of power projection against both the Philippines in the 2012 Scarborough Reef incident and Vietnam in the 2014 Hai Yang Shi You 981 incident. These events occurred in an era when the United States was pursuing engagement with China. At the same time, the United Kingdom and PRC were discussing a so-called golden era of economic partnership, and the EU was openly debating lifting the post-Tiananmen arms embargo. During a period where the strategic environment was particularly favorable for China, the CCP took a completely opposite tack to the US peace-dividend era of the 1990s. It is unlikely US or Taiwanese attempts to restore some semblance of deterrence by denial would result in an all-out arms race because the PRC has been single-handedly participating in an arms race for quite some time.

The second point of contention is the driving factor behind Xi Jinping’s focus on Taiwan. McKinney and Harris identify an increasing “cost of restraint” for China, as “Taiwan moves further away from the mainland, particularly in terms of its core national identity.” This is an argument directly taken from propaganda the Chinese Communist Party uses to justify the PRC’s aggressive gray-zone

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actions and various anti-secession laws. Taiwanese domestic politics, however, demonstrates this claim is false. Taiwanese politics center on maintaining the status quo, and given the deterrent power from the vast expansion of PRC military capabilities, this stance has become truer over time. The Democratic Progressive Party (DPP), the nominally proindependence party, has shifted more and more toward status quo over the last two decades: the party’s 2008 presidential nominee, Frank Hsieh, was considered more moderate than Chen Shui-bian, and the party’s 2012 nominee, Tsai Ing-wen, was considered more moderate still—and she continued this policy of moderation even after two landslide victories in 2016 and 2020. Without the CCP’s brutal crackdown on the 2019–20 Hong Kong anti-extradition law protests, the 2020 Taiwan presidential election would have likely gone to the Chinese Nationalist Party candidate Han Kuo-yu, who favored greater economic and political engagement with the PRC.

It is true the Taiwanese populace is gradually moving toward a more Taiwan-centric identity given the passing of the waishengren (the mainland Chinese migrants who fled to Taiwan with Chiang Kai-shek in 1949). Those same polls, however, also demonstrate a remarkable consistency and overwhelming public support for the status quo—some 87.4 percent support in July 2021 polling, in the midst of an aggressive PRC coercion campaign. The CCP shift from a hearts-and-mind strategy of economic enticements to gray-zone coercion/threat of invasion mirrors their actions in Hong Kong and Xinjiang, where Xi concluded exerting control via a velvet glove over an iron fist was unnecessary. In Hong Kong and Xinjiang, the Chinese Communist Party did not face serious threats to its power prior to the crackdowns. Instead, Xi defined down the cost of restraint to make any challenges, no matter how minor, unacceptably high. Thus, the authors’ prescriptions to reduce the cost of restraint for China is meaningless for the Party. The only concession the Party would appreciate would be the US abandonment of Taiwan and Taiwan agreeing to unification with the PRC.

The final point of contention is the proposed stick portion of the authors’ strategy that is based on a misinterpretation of the CCP’s interest in Taiwan.

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McKinney and Harris propose the “United States and Taiwan lay plans for a targeted scorched-earth strategy” to include the destruction of the Taiwan Semiconductor Manufacturing Company, Taiwan targeting of Shanghai’s Semiconductor Manufacturing International Corporation, and US evacuation of highly skilled Taiwanese semiconductor engineers. The strategic value of Taiwan for the CCP, however, is political, not economic. The authors reference the historical precedent of Swedish deterrence of Nazi Germany in World War II through the Swedish scorched-earth threat to its iron-ore mines. The biggest error with this analogy is that Hitler’s interest in Sweden as a target largely disappeared once Sweden and Germany reached an economic agreement for iron-ore exports, given Hitler’s focus on an impending showdown with the Soviet Union.

In Taiwan’s case, the semiconductors for Xi are a secondary concern at best; they are an important but not critical part of the Chinese economy precisely because Semiconductor Manufacturing International Corporation chips are considered relatively primitive (compared to the chips of their Taiwan Semiconductor Manufacturing Company, Samsung, and Intel competitors), which prevents the PRC from being a major player in the global chip supply chain. Thus, the threat to destroy Taiwan’s semiconductor industry while targeting Semiconductor Manufacturing International Corporation is relatively weak, especially compared to the enormous economic damage any cross-Strait war or blockade would cause by specifically targeting the semiconductor industry. The fact that the PLA continues to develop specific capabilities for an amphibious invasion demonstrates the CCP has “baked in” and will tolerate significant economic costs to take Taiwan.

In addition to the weakness of the threat, consider how Taiwan would perceive advice from the United States when asked to be prepared to blow up its most valuable industry. Such advice would imply the United States considers Taiwan to be a lost cause, showing the United States as unwilling to fight for its partners and instead prioritizing the evacuation of those Taiwanese who would be able to help build up the US semiconductor industry. Past the operational absurdity of such an evacuation—imagine the panic in Taipei as the US Air Force attempted to evacuate engineers just before or during the PLA Joint Firepower Strike campaign—this action would destroy the morale of the Taiwanese population and armed forces at the most critical point. Any Taiwan president who cooperated with such a plan would be run out of office (rightfully), and the CCP’s United Front propaganda apparatus would have a field day showing how the Americans and the “evil Taiwan independence separatists” were

prepared to blow up Taiwanese industry while the CCP tried to protect the livelihood of the Taiwanese people.

The rest of the article’s proposed punitive measures all fail along similar lines. Guerrilla warfare in a Taiwan context is only useful in support of an active US/Taiwan counterinvasion campaign, but would hold no deterrent power postwar, where the People’s Armed Police has decades of experience with concentration camps, group punishment, forced resettlement, and now the integration of AI-powered facial recognition and biometric systems to control populations. The United States threatening sanctions and political isolation do represent some deterrence, but these actions would be seriously, if not fatally, weakened if Taiwan fell, as that failure would show Chinese power now eclipsed the United States, that US willpower had collapsed, or both.

Moreover, these threats are not new. The Made in China 2025 program, the monopolization of the global supply of rare earth elements, and recent domestic ideological rectification campaigns all indicate the Chinese Communist Party is aware of the economic-political pressures the United States could effect—and are already implementing mitigation measures. Finally, the threats the United States would signal to its allies—that these countries could now develop their own nuclear arsenals—are also weak and would be an admission the US nuclear umbrella represented insufficient protection. In any case, following a US defeat or abandonment of Taiwan, US allies would probably be discussing the topic anyway.

In the end, I agree with McKinney and Harris that a traditional US deterrence-by-denial strategy for the defense of Taiwan is weakening, and deterrence-by-punishment is more compelling. I also agree with their point that Chinese strategic thinking “emphasizes the possibility and utility of limited wars and projects confidence in the ability of war handlers to bring such an engagement to a favorable political outcome,” though I must note CCP leadership considered the Sino-Indian War and the Sino-Vietnamese Wars not as political failures, but as worthy successes that should be emulated.14

Deterrence by threat of economic punishment alone is vastly insufficient. China does not care about the “ire of its Asian neighbors” because the Chinese Communist Party views neighbors as tributary states that will, sooner or later, fall into PRC economic domination.15 Nor does it care about temporary economic disruption in the absence of US military action. Chinese leaders feel they now have the political and economic tools to counteract the

resulting discontent, especially if they could credibly proclaim to their populace that this step was a necessary sacrifice for the reunification of China and for breaking the perceived US strategic noose around the country. For good reason, since his ascension in 2012, Xi has incessantly exhorted the CCP cadre to take more risks and to accept struggle as a necessary part of China’s national rejuvenation.  

If the goal of the United States is to deter Beijing from invading Taiwan, then we should seek to deter the CCP. US leadership should clearly state an armed attack on Taiwan without provocation will be seen as the CCP moving beyond an “issue of cross-Strait relations” to an all-out challenge of American power to extinguish a democratic partner, collapse the US presence in the Western Pacific, and overturn the rules-based world order.  

The only response to such an existential challenge must be a US demonstration of its ability to destroy the invasion fleet while systematically grinding the rest of the armed wing of the CCP, also known as the PLA, to dust. Only then will the threat of economic devastation turning into unresolvable political turmoil become real. Mao’s dictum that “political power grows out of the barrel of a gun” holds true for the CCP today with a Mao-era cult of personality—especially with a leader who has sought to revive Mao-era organizations (the United Front) and Mao-era vocabulary (“Yan’an rectification campaign”). In short, the United States must force the CCP to consider that a Taiwan invasion would not be a limited war, but a global, great-power war of indeterminate length, potentially threatening the CCP’s hold on power and the Politburo Standing Committee, all for the hubris of Xi.  

That is deterrence.  

What is not deterrence, is telling our partners we are prepared to help them blow up the one industry that makes them economically relevant on the international stage.

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Goliath No More:
Why Taiwan Should Not Rely on American Threats of War

Keywords: Taiwan, deterrence, punishment, semiconductor, China

A basic rule of international affairs is for David not to challenge Goliath to a duel.1 Absent luck, divine intervention, or a brilliant strategy, weak combatants rarely prevail over their much stronger adversaries. In situations where one side is vastly more powerful than the other, the laws of power suggest a stable formula for deterrence. As the Athenians explained to the Melians long ago, “The best recipe for success is to stand up to equals, defer to superiors, and be moderate towards your inferiors.”2

In his reply to our article, “Broken Nest,” Eric Chan drew on these intuitions to suggest a simple method of deterring China from invading Taiwan: the United States should merely establish incontrovertible military superiority over China and then explain the logic of the Athenians to the Chinese side.3 If such a solution were possible, we would naturally be all for it. We remain unconvinced, however, such a solution is possible. On the contrary, we are highly skeptical the United States can practicably regain military superiority in East Asia such that Washington can ensure Taiwan’s security by simply cowing Beijing into passivity. In turn, this leads us to doubt the credibility and long-term effectiveness of any strategy of deterrence that depends entirely upon US threats of military reprisals. Nothing Chan presented in his reply has moved us from this position.

In our article, we sought to articulate not just an alternative strategy for deterring a Chinese invasion of Taiwan, but also an alternative logic—one better suited to a world in which the United States is no longer Goliath. More specifically, we developed a first-cut proposal for deterrence focused on punishment (costs to be levied against Beijing in the event of an invasion) rather than denial (military threats to prevent an invasion from being successful). To be more precise, we suggested a package of punishments that, if threatened, might “convince

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Chinese leaders invading Taiwan will come at the cost of core national objectives: economic growth, domestic tranquility, secure borders, and perhaps even the maintenance of regime legitimacy." Our wager was that, because the Chinese Communist Party has staked its legitimacy on achieving its ambitious “China Dream” goals by 2049, CCP leaders will be forced to pursue the “balance between development and security” their official statements already call for. If it were clear an invasion of Taiwan would destroy any such balance and jeopardize the core goals, then such an action would only be taken in the most extreme circumstances.

Our specific proposal comprised four key elements. First, we called for a robust Taiwanese defense effort that would make Taiwan costly for Beijing to attack, defeat, and occupy. Second, we argued Taiwan should threaten China with a preplanned resistance campaign that would drain Beijing of resources, lives, and prestige even in the event of a successful invasion. Third, we proposed an organized effort to undermine China’s access to semiconductors, including the self-destruction of Taiwan Semiconductor Manufacturing Company facilities and other assets associated with semiconductor manufacturing, the use of Taiwanese cruise missiles against related targets on the Chinese mainland, and the enactment of global sanctions aimed at limiting China’s ability to recover and advance its chip industry. Fourth, we called for a regional response from US allies that would severely worsen China’s security environment.

The third pillar of this strategy has attracted more criticism than the others. Chan, for example, insists China does not value Taiwan because of its semiconductors and so threatening to destroy Taiwan’s semiconductor industry is no deterrent whatsoever. Nowhere have we argued China desires Taiwan because of its semiconductor industry. Rather, our argument is that China has become so dependent on Taiwan’s semiconductors that Beijing can now be made to fear being denied access to these technologies. Of course, we are open to debate about how costly it would truly be for China to be deprived access to Taiwan Semiconductor Manufacturing Company chips. We note that according to some news reports,

US intelligence officials believe China’s leaders are concerned about the impact a war over Taiwan would have on China’s access to semiconductors.⁶

Chan bristles at the idea the Taiwanese should threaten to “blow up the one industry that makes them economically relevant on the international stage.” Yet at the same time, Chan is at ease with the United States threatening all-out war with China in the event of an invasion. In any case, we disagree that remaining relevant on the international stage after a successful Chinese invasion is—or should be—more important to Taiwanese than deterring a Chinese invasion in the first place. While we accept a willingness to engage in self-harm may signal desperation, we submit Taiwan’s situation vis-à-vis China is increasingly desperate and such a signal may actually be necessary to demonstrate the credibility of Taiwan’s commitment to deterring an invasion. By contrast, refusing to contemplate threatening targeted economic self-harm, as Chan urges, telegraphs to Beijing and the rest of the world a dangerous unwillingness to take risks in pursuit of self-defense—a signal already suggested by the inadequate condition of Taiwan’s military readiness.⁷

What about the other three pillars of our proposed strategy? Chan does not address the first element, aside from arguing “Taiwan has significantly boosted defense spending.” To buttress this claim, Chan cites an article that details $9 billion in additional spending to be spent over five years. This works out as around .002 percent of Taiwan’s GDP over the same period. If Taiwan is intent on deterring a Chinese attack today, it should be spending in the realm of 5 percent of GDP on its defense, as it did in the 1980s and 1990s, not the approximately 2 percent it spends today.⁸ Additionally, it should not waste these funds on prestige weapons but instead invest in a large number of small things.⁹

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Regarding the prospect of a resistance movement, Chan states such an effort would “hold no deterrent power postwar.” This is obviously true. If the Chinese invade Taiwan then deterrence will have failed by definition. It is also true, however, that making a credible threat of resistance now might lessen the chances of an invasion taking place in the future. We agree with Chan that Taiwanese resistance against an invading Chinese army would be costly, but we would gently point out threats of war between the United States and China (Chan’s preferred means of deterrent) would also be enormously costly—including for the people of Taiwan—if ever carried out. Advocates of a great-power war in defense of Taiwan frequently overlook this point.

Finally, with respect to our proposals for a stiff regional reaction to a Chinese invasion of Taiwan, Chan counters that relying on such a response would admit the United States is not omnipotent in East Asia. This point is not so much a criticism of our argument as it is a restatement of it. We do indeed fear the United States lacks the capacity to impose its will unilaterally on Beijing. This is why we call for a strategy of deterrence enacted in collaboration with allies and partners, including Taiwan, whose leaders Chan seems to treat as helpless, scared of bad press, and lacking all agency.

We note with interest that Chan agrees with one of our major arguments when he writes “a traditional US deterrence-by-denial strategy for the defense of Taiwan is weakening, and deterrence-by-denial punishment is more compelling.” If we can put aside the idea the United States can stop an invasion of Taiwan in its tracks, the question becomes one of what sort of punishments should be threatened against Beijing so it is deterred from invading Taiwan. We have been clear about what we would propose in this regard. To his credit, so is Chan. But we found his answer troubling: “The only response to such an existential challenge,” he writes, “must be a US demonstration of its ability to destroy the invasion fleet while systematically grinding the rest of the armed wing of the CCP, also known as the PLA, to dust.” He goes on to argue the United States must threaten China with “a global, great-power war of indeterminate length.”

People in Taiwan and the United States alike should find these words chilling. Chan argues the only way to deter China from invading Taiwan is to threaten the total destruction of the People’s Republic of China as a party-state. How does Chan expect Beijing would act if this strategy were implemented? He does not say. If he did, Chan would be forced to spell out the apocalyptic consequences of what he is proposing—including for the people of Taiwan, whose island would be turned into a hellscape.

Whatever conclusions policymakers draw about our proposals—and we accept reasonable people can disagree on the points raised in our article—
we strongly urge them to reject Chan’s proposals. We remain unconvinced that threatening China with World War III is a credible means of deterrence. As Keith Payne, a former deputy assistant secretary of state, has convincingly argued, even a latent threat the United States might escalate a conflict over Taiwan via an uncontrollable chain of events (the threat that “leaves something to chance”) would only be credible if the United States held a “perceived advantage” over China, whether in terms of political will, risk tolerance, or superior military options.10 Yet, the United States does not hold these advantages over China across the Taiwan Strait. If Chinese leaders—not unreasonably—come to the same conclusion, they may judge the invasion of Taiwan to be rational in the near term.

This is why, in the final analysis, incredible threats of war are just another form of abandoning Taiwan. If adopted, Chan’s proposals would make a Chinese invasion more likely, not less. We urge policymakers in Washington and Taipei to focus less on the threat of a ruinous superpower war and more on different forms of punishment that might be threatened against Beijing to truly reduce the chances of an invasion.

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Keywords: extremism, US Capitol, military, misinformation, veterans

Because there were some people with a military connection involved in the US Capitol attack of 2021, there has been no shortage of academics and pundits seeking to use the tragedy to paint the military as rife with extremists. Parameters hosted one such effort in its Autumn 2021 issue: “The Alt-Right Movement and US National Security” by professors Matthew Valasik and Shannon E. Reid. While they do concede “the level and extent to which support for White power sentiments has infiltrated the US military remains unclear,” their article still carries great potential to misinform readers.

Specifically, the opening paragraph claims that “[c]urrently, there is an overrepresentation of military veterans affiliated with far-right groups and the broader White power movement.” It also asserts that “[m]ost recently, this affinity was underscored by the disproportionate number of servicemembers, who participated in the failed attempt to prevent the certification of the 2020 election on January 6, 2021.”

Valasik and Reid cite an April 2021 publication by Daniel Milton and Andrew Mines of the George Washington University Program on Extremism that examines the military experience among the “Capitol Hill Siege Participants.” What they fail to tell readers is that Milton and Mines provide a critical caveat to their assessment—they explicitly warn that “simply comparing the number of individuals with military experience to the proportion of veterans in the broader U.S. population is misleading.”

It is misleading, Milton and Mines tell us, because there is “no reason to think the arrestee population should be a representative sample of the U.S. population.” Furthermore, they point out that because the arrestees are “overwhelmingly male” a

“better comparison for the proportion of individuals with military experience is not with the overall proportion of veterans in the US population, but with the proportion of male veterans.”

Consequently, comparing the number of male veterans in the general population with the number of male veterans arrested in the US Capitol attack of 2021 causes Milton and Mines to conclude there “actually is a very slight underrepresentation of veterans among the January 6 attacks.” Yes, that is right, an underrepresentation. Additionally, as of this writing (January 29, 2022), the George Washington University Program on Extremism reports 87 people with some military connection have been accused of involvement in the Capitol attack.

Here’s what these observations mean in terms of the overall population of active duty and veterans. According to a 2021 Pew Research Center report, there are approximately 19 million veterans. Combined with the 1.3 million active-duty troops there is a total of about 20 million people in the United States with a military connection. What these numbers demonstrate is this: 99.99999 percent of Americans with a military connection were not charged with any crime in connection with the Capitol attack. Put another way, the percentage of veterans who were charged is so infinitesimal as to be statistically insignificant. The statistical insignificance is just as stark with respect to the active-duty force: only one person of the 1.3 million has been charged.

Notably, in January 2022, the George Washington University Program on Extremism issued a new report updating the one Valasik and Reid cited. It acknowledged the earlier report generated intense media scrutiny regarding alleged attack participants who purportedly had military or law enforcement backgrounds. With the benefit of additional data, the program issued a corrective.

A year after January 6, evidence from the cases to date show that neither of these affiliations characterize a large proportion of the defendants . . . 82 (11 percent) of the defendants had some confirmed form of prior US military service; the vast majority of this category is former military as opposed to active-duty servicemembers.

5. Bennett Clifford and Jon Lewis, “This is the Aftermath: Assessing Domestic Violent Extremism One Year after the Capitol Siege” (Washington, DC: George Washington University Program on Extremism, 2022), https://extremism.gwu.edu/sites/g/files/zaxdzz2191/f/This%20is%20the%20Aftermath.pdf.
6. Clifford and Lewis, “This is the Aftermath,” 15.
As a result, Bruce Hoffman, a senior fellow for counterterrorism and homeland security at the Council on Foreign Relations, praised the new report saying it “dispels misinformation surrounding Jan. 6, like exaggerations of the role that active military service members played in the insurrection.”

What has even less supporting data is the suggestion that the military is infested with White supremacists. To their credit, Valasik and Reid concede “little is known about the current prevalence of White power sympathies,” but point to Military Times polls as showing the “trend is moving in a concerning direction.” The most recent finding of these polls, the Military Times claims, is that “[r]oughly 31 percent of troops (57 percent of minorities) said they have seen signs of extremist behavior in the military.”

Actually, the Military Times polls really cannot tell readers much about the prevalence (or not) of White supremacy. Why? They ask a single question on the topic: whether the respondent had “personally witnessed white nationalism or racism within the ranks of the military.” The inclusion of the word “or” makes it impossible to differentiate between “white nationalism” and “racism.” The two terms do not necessarily mean the same thing (hence the poll’s use of both in the question), and it is possible some White troops believe they are victims of racism and responded accordingly.

Regardless, even if all polltakers understood the question as referencing anti-Black racism, the Military Times responses—to include the separate minority respondent figures—show the prevalence of such perceptions to be decidedly less than what polls show about civilian society. For example, polls show in the United States generally, “the vast majority (71 percent) of Black Americans say they’ve experienced some form of racial discrimination or mistreatment during their lifetimes.”

Space limitations preclude a further dissection of the Valasik and Reid article, but let’s be clear about something: the military, like American society in general, needs to stamp out racism and White supremacy. In this respect, I believe Valasik and Reid have some ideas worth pondering. Exaggerating the problem beyond what the data show, however, dangerously erodes public confidence in the armed forces, diminishes the propensity of minorities to join, and gives succor to America’s enemies around the world.

Charles J. Dunlap
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Select Bibliography


As the authors of “The Alt-Right Movement and US National Security,” we appreciate the time and effort spent by retired Major General Dunlap to respond with his insights into the article. While we can understand his concern about misrepresentation or overemphasis on the involvement—or risk of involvement—of active-duty or discharged servicemembers in the White power movement, he is missing the broader perspective the article emphasizes, namely, “that the number of individuals with military experience among the January 6, 2021, perpetrators is concerning.”

As of today, the number of individuals with military experience who have been arrested for attacking the Capitol has only increased, representing 120 of the 753 individuals, or 15.9 percent of those charged in federal court. Furthermore, it is naive to assume these 120 individuals represent the entirety of active or discharged servicemembers who participated in Capitol attack of 2021.

The overarching goal of our article was to reinforce Secretary of Defense Lloyd Austin’s assertion that extremism is “not new to our country, and sadly, not new to our military” and provide practical strategies that better equip the US military to frustrate the recruitment efforts of White power Domestic Violent Extremists (DVEs) at attracting members from their ranks. Refreshingly, on December 20, 2021, the Department of Defense updated the language of Department of Defense Instruction 1325.06, defining “active participation” in “extremist group(s)” more broadly and potentially facilitating the ability for the US military to begin rooting out support for White power DVEs by active-duty servicemembers.

While updating and implementing *Department of Defense Instruction 1325.06* is a much-needed starting point for addressing sympathy toward White power DVEs by active-duty servicemembers, Major General Dunlap is correct in pointing out the fact that the majority of servicemembers arrested (91 percent) were discharged from the US military and had been, on average, “separated from military service for nearly 15 years.” This fact further reinforces our argument the US military should be making a concerted effort to support servicemembers as they exit the armed forces, particularly if the act of leaving is not voluntary, as this transitional phase may put them most at risk as “disillusionment, trauma, lack of opportunities, and removal of the rules and safeguards” make them vulnerable to the pull of White power DVEs.

Our position is concentrated on the need for the US military to confront this problem head on finally. Similar to focusing on the risk factors associated with mass shootings, gang-related violence, or even suicide, it does not involve the majority of citizens in society, but a minority. Yet the behavior of that minority produces serious consequences for the rest of us. So we can all agree within the whole of the US military and its veterans, the involvement of individuals in the White power movement may be small, but the risk to those who are involved and to those who come in contact with them is important. The Capitol attack of 2021 is one example of the reasons we should all be concerned about the interaction between the White power movement and the US military. It was not a one-off event (though it was certainly one of the most dramatic in recent history) and we can also look at the Oklahoma City bombing and a range of smaller tragedies.

In an unpublicized Pentagon report from October 2020, a range of concerning behaviors were discussed about how military members interacted with neo-Nazi and White power propaganda. For example, a Florida National Guard member is a cofounder of Atomwaffen Division, and another Atomwaffen Division member was removed from the Marines after his participation at the Unite the Right Rally in Charlottesville, Virginia. Three self-proclaimed Bugaloo Bois, an Army Reservist and two veterans, were arrested for planning to incite

violence at a Black Lives Matter protest. These are just a small subset of cases which underscore the need to have a better understanding of the depth and breadth of the White power problem in the US military.

Major General Dunlap’s rebuttal also ignores the ongoing recruitment of active and discharged servicemembers by these groups. Groups like The Base explicitly worked to screen for new members with military experience. The Southern Poverty Law Center reviewed audio recordings between members of The Base and 100 prospective recruits. Of these 100 recruits, 20 percent reported they were active duty or had military experience. This concern was also highlighted in the Pentagon report stating: “Despite a low number of cases in absolute terms, individuals with extremist affiliations and military experience are a concern to US national security because of their proven ability to execute high-impact events.” This is the double-edged sword of the interaction between the White power movement and the US military. The White power movement has elements which attract members of the US military, and these groups also actively look to exploit that attraction. This process has repeated itself as we shifted through different periods of active military action and removal of troops from long-term deployments. As Kathleen Belew has repeatedly discussed, the disillusionment and anomie that was present after the Vietnam War was a critical element in the growth of the White power movement in the early 1980s.

While our article was not intended to be an indictment of the US military, it is focused on the need to meet a well-documented problem head on. Ignoring the serious problem caused by the small proportion of active and discharged servicemembers who are involved in, or being recruited by, the White power movement just because the majority of servicemembers are not involved is short-sighted and dismissive. The consequences of membership in these groups can be life-altering and damaging to the individuals and their families and the broader military community. To dismiss anyone who is involved in this movement as unimportant for prevention and intervention does a major disservice to individuals who have placed their livelihoods in the hands of the US military.

Shannon E. Reid
Dr. Shannon E. Reid is an associate professor in the Department of Criminal Justice and Criminology at the University of North Carolina at Charlotte. She is the lead author of *Alt-Right Gangs: A Hazy Shade of White* (2020), which examines the rise of alt-right groups through the lens of street gang research.

Matthew Valasik
Dr. Matthew Valasik is an associate professor in the Department of Sociology at Louisiana State University. His interests are in the socio-spatial dynamics of gang behavior and strategies aimed at reducing gang violence. He is the coauthor of *Alt-Right Gangs: A Hazy Shade of White* (2020), which examines the rise of alt-right groups through the lens of street gang research.
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On “The Battalion Commander Effect”

Ralph Masi
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This commentary responds to Everett Spain, Gautam Mukunda, and Archie Bates’s article, “The Battalion Commander Effect,” published in the Autumn 2021 issue of Parameters (vol. 51, no. 3).

Keywords: command, leadership, retention, promotion, validity

The article, “The Battalion Commander Effect,” is a helpful, additional step in addressing one possible correlate of lieutenant retention, arguing for its role as key determinant in junior officer stay-or-leave decisions—while simultaneously advocating for the role of retention in senior officer promotion decisions. At face value the article oversimplifies, given several possible methodological issues, while making a leap to promotion board determinations. Analyses should be expanded, with detailed quantifiable results provided before any serious discussion of policy implications (for example, promotion board decisions affecting former battalion commanders), are undertaken. Methodological concerns, including possible omitted variable bias, should be addressed to confirm validity, before far-reaching implications for practice are drawn.¹

Expanding analysis “out” would include both company and brigade commander effects, in addition to the current battalion commander effects. Expanding it “down” would add more refined assessments of battalion commander effectiveness; some via Officer Evaluation Reports, others potentially via “360 evaluation” of leaders. Once done, detailed results, including regression coefficients and p-values, could be included in tabular form, for example, in an appendix if preferred due to space constraints. Showing the relative effect, and power, of each is key to a more complete understanding of the battalion commander effect.

That battalion commanders have a major effect on lieutenant retention in relation to other factors is undisputable. They do, after all, “check the box” on the lieutenant’s evaluation, from “Most Qualified” to “Unqualified.”² By the


². Headquarters Department of the Army, Revised Officer Evaluation Reports, April 1, 2014, Implementation.
major promotion board, likely future battalion commanders have already been earmarked. Junior officers through the rank of captain also know if they are “going places,” or will be left behind, as a direct function of those assessments. During years of working officer retention in the Office of the Deputy Chief of Staff of the Army/G-1, with officer analysis at the year-group level of detail, I noted many former officers from my West Point class who, on discerning they would not be battalion commanders, left service after company commands and moved on to rewarding careers in the private sector. This is not unusual, among service academy graduates—they are prized by industry, too, given the breadth and depth of academic and leadership training; if they leave early.

That specific behaviors and overall effectiveness (apparently not measured or employed) of battalion leaders can also be a major correlate of retention (not a predictor, though, as the authors note) is also not in dispute. Alongside other “leadership” variables, the singular battalion commander effect measured generically in the study may well diminish—and significantly. Likewise it could be shown to be stronger still for “good” battalion commanders versus weaker ones, if such variables were measured and included in analysis.

Leadership variables (for example, additional independent variables in regression equations) might include tactical and technical proficiency via the leader’s professional standing, as measured by evaluations at the time those lieutenants were assigned; the same is true for leader interpersonal qualities (for example, “people skills”) and sincerity—does the leader act without pretense? If these qualities were added to the study, greater value could be obtained and the variables could eventually become points on a “talent checklist” that could more effectively assess the impact of a commander.

Hence, more could be done with a statistical sample of 1,745 former battalion commanders and their 36,032 lieutenants. Roughly 20 lieutenants per former battalion commander can provide significantly more by way of insight than the study reveals, via interviews and focus groups to expand the basic findings.

Details of the additional empirical tests that were mentioned on other leaders need to be included in the article; it appears company commander impacts may have been included, but details are not provided. Brigade-level leadership does not appear to be included in the analysis at all. Independent variables used in the Spain, et al., study, in addition to former battalion commander, included officer commissioning year (year group), post, branch, source of commission, gender, race/ethnicity, age, commission source quality, marital and child status, and graduation from prestigious tactical schools (for example, Airborne and Ranger schools). Instead, more evaluation by way of so-called lateral comparison of battalion commander effect to company and brigade commander effect can,
and should, infuse the analysis and discussion and enhance construct validity. Are we measuring what we think we are measuring(?)—that is, decision to leave service, as a function of leadership, and whose leadership? Such “apples-to-apples” comparison is essential.

In summary, the most important implication of the study for practice, assessing battalion commanders on officer retention, could well be based on a false set of assumptions (for example, that it was the battalion commander and his effects driving losses). This common misperception ended many promising careers in an earlier day, when reenlistment rates were a criteria for evaluation for both battalion and company commanders. Ironically, this was the period of the “hollow Army,” with enlisted cohort high-school graduation rates at a low point for the volunteer Army, and bottom quartile on the Armed Forces Qualification Test at a record high. The Atlantic article, “Why Our Best Officers Leave,” notes correlates from weak generalship to bureaucratic management that stifle initiative and entrepreneurship. Finally, service academy graduates do leave active duty at a relatively high rate. Given the cost to produce these officers, which is higher than for other commissioning sources, there is another field for further study.

Next steps should include expanding analysis as indicated and conducting structured interviews with high-performing battalion commanders and focus groups with their junior officer cohorts, following the formers’s change of command. A plausible addition to the body of work—and easy to implement—would be a survey of all lieutenants and junior captains leaving active duty and their reasons for resigning. Questions could be formed under an organizing scheme that focuses on Army, local command climate (battalion, brigade, and installation), private sector, and personal (for example, family).

There are a number of ways to pinpoint the problem of junior officer retention. As the US Army moves back into a period of relative stability without war and the drawdown effects that have followed three times in the last 50 years—after Vietnam, the Gulf War, and the war in Iraq—the time to do so is at hand.

Ralph Masi
Dr. Ralph Masi is an adjunct professor of leadership at the College of Business, University of Maryland Global. He is a retired infantry officer and attack helicopter pilot and last served on active duty as chief of plans, Office of the Deputy Chief of Staff for Personnel, Army Staff, where he worked officer retention. He continued this work at RAND Corporation. His dissertation at University of Illinois centered on commanders’ leadership and effects.
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The Authors Reply

Everett Spain, Gautam Mukunda, and Archie Bates

Keywords: battalion commander, leadership, promotion, retention, talent, role model

We thank our colleague for both his distinguished Army career and his thoughtful and comprehensive review of our manuscript. Also, we are grateful for Parameters providing us the space and audience to engage in this important dialogue. We humbly offer the following response.

The purpose of our study was to empirically investigate the anecdotal relationship between battalion commanders and their lieutenants' retention (for example, BCE), and our analysis found there was, in fact, a statistically significant correlation between them. Our colleague argues our analysis would be improved if we included leadership-related variables about the battalion commanders, such as sincerity, people skills, and tactical and technical competence. We agree these variables (and several others) could be mechanisms of a battalion commander’s influence on his or her lieutenants, but we are not aware of a reasonable mechanism to get these data in sufficient numbers of former battalion commanders to test them statistically. He also argues brigade and company commanders may similarly influence lieutenants’ retention decisions and should be included in the analysis. This is certainly plausible. We decided not to include brigade commanders since they have relatively infrequent interactions with lieutenants and, therefore, likely slight influence over their propensity to continue to serve. In retrospect, we could have included brigade commanders in our analysis and let the statistics confirm (or deny) this.

Regarding including company commanders in our analysis: we did not include them and believe not doing so was wise. First, the climates company commanders set are influenced significantly by their battalion commanders, but not vice versa. So, an empirical analysis that included both company and battalion commanders in the same regression would likely obscure each variable’s predictive effect. Second, company commanders lead roughly three to six lieutenants each, which is not a large enough group size to test empirically with statistical confidence. Ultimately, we worked to avoid over-specifying our regression by identifying a small, yet meaningful, subset of variables for our
analysis, given it was both impractical and unwise to measure and include every contextual variable.

We agree readers would benefit from more statistical evidence of our findings, such as tabular lists of regression coefficients, p-values, and other data customarily depicted in papers based on empirical analysis. However, at the time of our submission, *Parameters* restricted authors to two or fewer graphics. We understand *Parameters* is in the process of adding a feature, which will allow future authors to include hyperlinks to additional online content, which is welcome news for researchers who wish to publish in *Parameters*. Earlier in our careers, we were frustrated to learn many scholarly publications charge fees to practitioners to download their articles (for example, “Early Predictors of Successful Military Careers among West Point Cadets,” *Military Psychology*, 2020, https://doi.org/10.1080/08995605.2020.1801285) which severely reduces the likelihood of Army leaders reading, sharing, discussing, and challenging their ideas. This is one of the reasons we targeted the open-access *Parameters* for our research, and we are grateful for its refereed peer-reviewed publication of our article.

Based on his cautionary experiences of watching the Army evaluate commanders according to their reenlistment rates, our colleague suggests the Army should be wary of using the BCE as an evaluation criterion for senior officers. We acknowledge the evidence we found on the BCE is more correlative than causal in nature. This is one of the reasons our paper suggests the BCE not be singularly considered as the definitive measure of leadership (or lack thereof), but as one of several informing assessments that can better contextualize leaders’ influence from many perspectives and within context. We encourage future researchers to investigate the BCE’s causal chain by using various empirical techniques to help establish causality, such as using an instrumental variable. Regardless of whether the Army decides to use the BCE to inform senior officer promotion and selection decisions (performance feedback), it should certainly establish a mechanism to provide BCE data to officers to encourage them to reflect on how they are treating/leading their lieutenants (developmental feedback).

Finally, our colleague’s suggestion the Army give all departing lieutenants formal exit interviews is wise, and we have advocated for this for some time (for example, “Making Exit Interviews Count,” *Harvard Business Review*, 2016). The Army agrees, and it employed an exit interview survey until recently. Additionally, in 2020, the Army implemented the Department of the Army Career Engagement Survey (DACES), which is e-mailed to every soldier every year during his/her birth month. Interestingly, the Army received as
many DACES responses in its first two months as it had received exit interview responses in the previous two years, so the Army recently wound down its exit interview survey and uses the DACES for the same purpose. The DACES data is likely more valid as it allows for longitudinal perspectives on the same population leading to their exits (or retention), while exit interview data are gathered once during an emotional time.

As we had hoped, the BCE paper has the Army talking. An Army component commander to a Department of Defense combatant command shared it with his generals at his recent command conference. At least two of the branch schoolhouses are sharing it at their colonel- and lieutenant colonel-level pre-command courses. We have had the opportunity to present it to the brigade and battalion command teams of an Army division and to a forward-deployed general staff. To start these conversations, we invited the participants to list the names of the lieutenants who served in their companies when they were company commanders. We then requested they identify one third of those lieutenants as high-potential (HIPO). Next, we asked them to mark whether each lieutenant stayed in the Army long enough to be a company commander. Finally, we asked them to calculate their Company Commander Effect (CCE) and CCEHIPO. Most of them completed our request, and then the conversation about the BCE and BCEHIPO really flowed. Some of them responded with, “But I don't know if LT Smith or LT Nguyen stayed in or got out.” Those commanders may have other issues.

Overall, our colleague’s feedback is very well taken, as our profession encourages this sort of dialogue. His comments add to a conversation that already includes significant responses from current and former officers. Much reaction has been in the form of, “Yes! My battalion commander was terrible, and he/she influenced me to get out,” or “My commander was inspirational and, look at me, I’m still here after 20 years.” We have also received a moderate amount of pushback, some of it similar to our colleague’s comments on potential omitted variable bias.

Interestingly, we have been asked, “Is there an equivalent of the BCE on junior enlisted soldiers?” We believe it might be the platoon sergeant effect (PSE), because a platoon sergeant is typically a sergeant first class, the first senior non-commissioned officer rank, tenured in the organization (for example, selected by a Department of the Army centralized selection board) and able to remain in the Army until well after minimum retirement age. A platoon sergeant is also two supervisory levels above most of his or her junior enlisted soldiers, similar to a battalion commander being two supervisory levels above
his or her lieutenants. We would encourage future empirical research on this hypothesized PSE.

Again, we thank our colleague for his important contribution to this valuable conversation. As our nation’s threat environment grows ever more complex, quality leaders will become even more important than they were in the past. The Army’s success crucially depends on ensuring its best lieutenants decide to stay. If the BCE idea helps senior officers think more about how they are impacting the retention of their junior officers, especially their highest potential ones, our future Army stands to be even more ready to fight and win.

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**Gautam Mukunda**

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Spartans Maintain Airborne Proficiency

Paratroopers from across the 4th Infantry Brigade Combat Team (Airborne), 25th Infantry Division, “Spartan Brigade,” conducted an airborne operation onto Malemute Drop Zone, Joint Base Elmendorf-Richardson, Alaska, July 14, 2021, from C-130J aircraft of the 815th Airlift Squadron. The Spartan Brigade is the only airborne infantry brigade combat team in the Arctic and Pacific theaters, providing the combatant commander with the unique capability to project an expeditionary force by air.

Photo by Major Jason Welch
VIRIN: 210714-A-XI247-004
Photo ID: 6734954
https://www.dvidshub.net/image/6734954/spartans-maintain-airborne-proficiency

Indonesia Platoon Exchange 2020: Lightning Academy Green Mile

Soldiers assigned to 3rd Squadron, 4th Cavalry Regiment, 3rd Infantry Brigade Combat Team, 25th Infantry Division and the Indonesian 431st Para Raider Infantry Battalion executed the Green Mile, a physical endurance course that concluded their training for the 2020 Indonesia Platoon Exchange at the 25th Infantry Division Lightning Academy Jungle course on November 21, 2020.

Photo by First Lieutenant Angelo Meja
VIRIN: 201121-A-PD523-0069
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